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"Scire est nescire, nisi id me
Scire alius sciret."

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THERAPEUTICS OF A SEA VOYAGE.

BY

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Up till about the sixth or seventh decade of the nineteenth century the "sea voyage" held a definite place in the list of favourite therapeutic measures. Amongst others, the distinguished Dr. Andrew Coombe—himself a sufferer from chronic phthisis—warmly advocated its adoption in the treatment of that disease, and in doing so spoke from his own personal experience. In recent years its popularity has markedly declined, and it has become a comparatively rare prescription.

The principal cause of this is to be found in the altered conditions of ocean travel. Passengers are no longer conveyed to India, America, or Australasia in sailing-ships, which take months of varied experience on the wide seas to reach their destination, but are hurried thither in half or a quarter of the time in crowded steamers, whose dates of arrival can be calculated with mathematical precision. This change has

been called for by the advance of trade and civilisation. Time is the most precious of all commodities, and, other things being equal, the fastest vessels will always be the most favoured. But from the point of view of the health-seeker there can be no comparison between the two kinds of transit.

The liability to sea-sickness, the terror of so many persons, is infinitely less in a sailing-ship than in a steamer. The constant vibration of the steamer certainly predisposes to sickness, and it is impossible, even under the best conditions, to wholly eliminate the disagreeable emanations from the engine-room, the disturbing noise and throb of machinery, or the falling of soot on the deck. Above all, the steamer pursues her way *relentlessly*, irrespective of contrary winds and currents, so that the inco-ordinate movement of combined pitching and rolling, with the thump of the propeller, are trying even to the most seasoned traveller. How different is the passive and yielding movement of the sailing-ship. By the very laws which govern her propulsion she cannot ruthlessly attack a head sea. Her navigation depends on the constancy of the Trade winds and the ocean currents, and, by taking full advantage of these, she usually enjoys a wind more or less abaft the beam, and her movements are comparatively gentle and regular, while in calm weather, with all canvas set, she slips along with a delicious smoothness comparable only to skating or flying. In a long voyage by steamer, a "bad sailor" may suffer so continuously as to be brought into a state of dangerous asthenia, but in a sailing-vessel sickness is but transient.

In the course of a recent tour round the world I had occasion to make such observations as these. I had engaged a berth in a steamship bound for Australia, because I could not hear of a sailing-ship intended for passenger service. For, although the harbours of the world are crowded with splendid sailing-craft, hardly any of these are fitted up for passengers, or carry a doctor.

Finding, however, that Messrs. Devitt and Moore's fine

three-masted clipper *Illawarra*, of 3,700 tons burthen, Captain Maitland, was furnished with good accommodation, and was to leave England for Melbourne on September 25th, 1901, I cancelled my engagement, and took a berth in the *Illawarra*. This well-appointed iron ship carries about thirty young cadets who are trained for the merchant service, and are systematically taught the theory and art of navigation by a special nautical Tutor, as well as by the Captain and Officers; and they also assist the crew in working the ship. There is berth accommodation for twenty-two passengers; but, as we carried less than a dozen, everyone had a self-contained cabin. The saloon and passengers' and Captain's cabins occupied the poop, while the cadets' and officers' quarters were amidships. Dr. Hall, of the Birmingham School, was Medical Officer.

We left Plymouth on the 25th September, and encountered rough weather in the Channel. For several days most of the passengers felt uncomfortable; but by the end of the week we had passed the Bay of Biscay and were off Finisterre, and all had fully recovered. In another week we were bowling along with the North-east Trades in exquisite weather, with all ports and hatches open. On the 24th October we "crossed the line." Even when sailing through tropical latitudes the heat was almost constantly modified by a gentle, cool breeze, blowing by night and day, while frequent short-lived showers of tropical density still further freshened the atmosphere. It was not till we had reached 23° south of the Equator that we experienced the "doldrums," and these were soon over. The first fortnight of November was marked by a daily fall of temperature, which required a rapid resumption of warm clothing, and by the 15th of that month we were in the "roaring forties"—the strong, cold, southerly winds that prevail between the 40th and 50th parallel south of the Equator. Latitude 40° in the South Atlantic, corresponds in temperature to about 51° in the North Atlantic, because the Northern Hemisphere, consisting mostly of land, retains the solar heat, while the Southern Hemisphere is chiefly ocean. On November 20th we were 500 miles south of the Cape

of Good Hope. On December 4th in latitude 42° 45′ S. (corresponding to that of the Riviera, north of the Equator), the temperature was 32° F., and we were running before a tearing south-west wind, with frequent hail and snow squalls, and shipping large seas—a contrast indeed to the weather of a few weeks before; and this was summer! Similar weather lasted till Australia was reached on the 22nd December. On the 23rd the *Illawarra* lay at her wharf in Melbourne, having sailed 14,000 miles in 88 days at an average speed of 159 knots a day.

In Melbourne another acute change of temperature awaited us. On Christmas Day, which occurs at Midsummer, the heat and the dust were most oppressive, and on Boxing Day the temperature at noon was 110° F. in the shade! The only relief was to spend the day in bathing, facilities for which are provided at seaside resorts easily accessible from town.

Therapeutically, what is to be said for and against such a voyage as this? In incipient phthisis much benefit may be looked for from the constant inhalation during waking hours of the purest possible atmosphere, the increased appetite engendered by the sea voyage and the fresh breezes, the large amount of sunlight in tropical and sub-tropical regions, and the easy forms of exercise cultivated on board ship. In advanced cases the violent changes of temperature, and the absence of home comforts are an absolute bar to this treatment. The gain to the pulmonary subject, too, must be discounted by the difficulty of securing perfect ventilation below. In rough weather all ports have to be closed, and a sailing-vessel has not the electric fans which are so inestimable a boon in the luxurious modern liner. Improved ventilation is the one great desideratum in designing a passenger-bearing craft, and there is no reason why ingenuity should not overcome the difficulty. It may be remarked that the homeward voyage from Australia is altogether more suitable for the invalid than the outward. The ship then takes a more northerly direction from Melbourne, soon emerges from the "roaring forties," steers for Natal, passes round the

Cape with the Agulhas and Southern Atlantic currents, and calls at St. Helena. The return voyage is longer but more agreeable; and as the *Illawarra* generally carries home a cargo mainly of wool, she is more buoyant than with the heavy mixed cargo with which she sails to the Colonies.

In convalescence from acute illness, in nerve exhaustion from over-work or any other cause, and in the anæmia and enfeeblement of rapid adolescence ("outgrowing his strength"), no treatment could possibly be better or as good as the long sea voyage described. Such absolute repose of body and mind can never be obtained at any health resort at home or abroad. The absence of a daily newspaper and the excitements of the telegraph and post, the freedom from all petty anxieties and social worries, the perfect physical rest, the soporific effects of the air, and the cradle-like movement of the great ship, the unrivalled opportunity for general reading, the firsthand contact with Nature in some of her grandest aspects, the ever-changing moods of the ocean, the marvellous flight of the albatross, the ceaseless escort of different kinds of birds, the shoals of flying fish, the spouting of whales, the speaking of other ships, and the interest centering in the ship herself as a kind of personality, and her behaviour in various circumstances: all these are wholesome and recuperant features in an environment which reduces life to its primal elements, and banishes fatigue of the nerve centres and of the organic processes.

In the neurasthenia accompanying prolonged dyspepsia the voyage is contra-indicated. The delicate dietary and the supplies of fresh milk required in such conditions are not available; and although the food on board the *Illawarra* was most excellent of its kind, and attractively cooked and served (a number of live sheep, pigs and poultry were carried, and fresh meat was supplied daily), yet a certain amount of monotony was unavoidable—hardly appreciable by a healthy stomach, but unfavourable for the dyspeptic.

What about the general monotony of the voyage? someone asks. To persons whose happiness depends mostly on society, the circle of officers and passengers is felt, perhaps,

to be too restricted; but to the lover of books and Nature there is no monotony except during "easting down" in the "roaring forties," when reading is prohibited by cold winds and soaking decks, and the sea is too sullen and angry to be lovable. Moreover, there is no lack of amusement—concerts, games, etc. As before mentioned, however, the return voyage is under happier auspices as regards weather.

Three months is a long period to be out of sight of land, and there is no doubt that, from the passenger's point of view, the charms of the voyage would be enormously enhanced by calling at such interesting spots as Madeira, Tristan d'Acunha, St. Paul. But this would be "ocean-yachting," and is inconsistent with the direct and quick passage exacted by the requirements of trade.

In a future paper I hope to touch on a few more matters of interest from a medical standpoint observed during succeeding travels.

ON THE PROBABLE RHYTHMICAL CONTRACTION OF THE BRONCHIAL MUSCULAR COAT AS A FACTOR IN PULMONARY DISEASE.

BY

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A CONSIDERATION of the pathology of certain pulmonary affections led me, some years ago, to the view, which I expressed in an article on Bronchitis in the *Encyclopædia Medica*[1]:—"It is not improbable that, like the alæ nasi and vocal cords, the bronchial muscle may rhythmically dilate and contract with inspiration and expiration. I believe that this largely explains why in bronchitis and asthma the dyspnœa is expiratory rather than inspiratory, inasmuch as the muscular spasm is more or

[1] Vol. ii., 1899, p. 117.

less inhibited during inspiration, permitting air to be inspired more freely than during the period of bronchial spasm it can be expired, consequently the lungs become distended and emphysematous." I was led to the conviction that such rhythmical contractions occurred as the only satisfactory explanation of the pulmonary distension in bronchitis and asthma, although I found no mention of anything of the kind in the current text books of physiology, pathology, or medicine; but more extended search has shown me that in postulating this rhythmical action I am only reviving an obsolete and abandoned theory.

Certain **clinical phenomena** associated with asthma, bronchitis, and emphysema afford strong evidence in support of the theory of rhythmical bronchial contractions and dilatations, without which no satisfactory explanation is forthcoming.

(1.) The theory that spasmodic asthma is due to spasm of the muscular coat of smaller bronchi—first put forward by Reisseissen, and upheld by Hyde Salter—is that which finds most general acceptance at the present time. Indeed, Dr. Goodhart [1] states that "this view, originally affirmed by Reisseissen, . . . has since then been proved on experimental observation by numerous observers from C. J. B. Williams onwards, including Paul Bert, Riegel, Biermer, Lazarus, and others."

It is said that, the bronchial obstruction being incomplete, the air enters the lungs under the labour of forced inspiration, but that expiratory paralysis or obstruction prevents its getting out: that "the spasm of the bronchial tubes must tend to prevent air getting in and out; and the more in or out according as the inspiratory or expiratory force is the greater.[2]

But in asthma the dyspnœa is mainly expiratory; and it has been proved that the expiratory force in forced respiration is much greater than the inspiratory, and the difficulty of reconciling these facts with the occurrence of over-distension of the lungs in asthma has given rise to much controversy; indeed, so great is the difficulty of accepting the bronchial spasm theory that Wintrich and others have fallen back on the theory that asthma is due to spasm of the diaphragm, while

[1] Allbutt's *System of Medicine*, vol. v., 1898, p. 298.
[2] Goodhart, *loc. cit.*

Weber and his followers have introduced the hypothesis that asthma is due to vascular engorgement of the bronchial mucosa. None of these theories are satisfactory or sufficiently supported by clinical observation to meet with general acceptance, hence it may be said that no theory has yet been put forward which is not open to obvious criticism.

But I venture to suggest that if we admit that the bronchi dilate on inspiration and contract on expiration, all the difficulties in accounting for the clinical phenomena alluded to at once disappear. Instead of having to hypothecate that asthma "contravenes usual rules," or that "natural order is destroyed," we see that the contraction phase of physiological respiration is merely accentuated; consequently, expiration is so prolonged that a fresh inspiration has to be made before the expiration is complete, until at length, the chest becoming more and more distended, there is no possibility of distending the chest any further, however forcible the inspiratory effort may be.

(2.) In acute bronchitis, again, we find certain phenomena which are explicable by a rhythmical contraction of the bronchi, viz., the prolongation of expiration, and in marked dyspnœa the tendency to over-distension of the lungs, in conjunction with patches of collapsed lung when any small bronchial tube has been occluded by mucus which has been sucked down. Over-distension of the lungs (acute emphysema) is most obvious in the acute suffocative bronchitis of the small tubes, in which more air is at first drawn in by the forced inspiration than can be expelled by the expiration, much prolonged as it is. In capillary bronchitis of young children, on the contrary, the bronchial muscular coat is prone to early paresis or paralysis, with resulting acute bronchiolectasis[1]

(3.) The development of acute emphysema and chronic hypertrophous emphysema appears to me capable of more satisfactory explanation by excessive contraction of the bronchioles during expiration, than by any current hypothesis. Laennec was the first to establish the now abandoned theory that chronic emphysema is due to distension of the lungs during inspiration, the

[1] Cf., "Bronchiectasis in Young Children," J. W. Carr, *Practitioner*, 1891, xlvi. 86; "Acute Bronchiectasis," S. J. Sharkey, *St. Thomas's Hosp. Rep.*, 1894, xxii. 33; Wilson Fox, *Diseases of the Lungs and Pleura*, 1891, p. 114.

air thus inspired being unable to escape during expiration, owing to obstruction in the bronchi from catarrhal swelling or accumulated mucus. Sir William Jenner's expiratory hypothesis was stated in 1857, and is still generally accepted. In short, his theory was that frequently-recurrent cough, with consequent compression of the lungs when the glottis was closed, results in the distension of the air vesicles; and he made a great point of the fact that the portions of the lungs which are least supported by the chest walls are, as we should expect, just the parts where hypertrophous emphysema begins. This, however, does not account for the fact that, sooner or later, large lunged emphysema becomes general throughout the lung; and he had to introduce the hypothesis that the lungs yielded in time in portions corresponding with the intercostal spaces, and that as the lung became enlarged by emphysema it shifted its position in relation to the chest wall, and so successive portions corresponded with the intercostal spaces.

Now the chest walls are the most unyielding compressors of the lung in coughing, and thus the greater portion of each lung which is supported and compressed should be collapsed rather than emphysematous, *i.e.* if Jenner's theory is the correct solution; whereas, so far from this being the case, even the chest wall itself becomes distended in chronic emphysematous persons. Instead of the cough, I suggest that the cause of the emphysema is the recurrent attacks of bronchitis or the persistence of conditions causing difficult and prolonged expiration, and therefore chronic over-distension of the lung. An exactly similar process results in the chronic emphysema of chronic asthmatics. If constant cough was really the cause of hypertrophous emphysema, is it not curious that this form of emphysema is so remarkably rare in phthisical patients, who, above all others, are the subjects of frequent cough, persisting for years?

Indeed, violent and persistent cough may be said *per se* to cause pulmonary collapse rather than emphysema, and an excellent illustration of this fact was afforded by a young child recently admitted to the Royal Infirmary under Dr. Waldo, suffering from whooping cough. On admission, as the result

of violent paroxysms of cough, very extensive collapse of the lung was found to exist; but this soon disappeared by the spontaneous distension of the collapsed areas. Surely if violent cough is the cause of emphysema, this child should have been the subject of acute emphysema, and the fact that the chest walls were so yielding should have favoured its occurrence if Jenner's theory is correct.

The **physiological evidence** tending to support the theory of rhythmical bronchial contractions is indirect, inasmuch as no observer has yet succeeded in conclusively demonstrating these contractions and dilatations corresponding with the respiratory movements. But it is obvious that there are many inherent difficulties in making correct observations of the slight contractions and dilatations of the deep-lying bronchioles, where alone broncho-motor phenomena, if they exist, would be most pronounced. In quiet respiration, at any rate, bronchiole movements must be very slight, and the fact that the respiratory movements of the alæ nasi and of the vocal cords, which are so pronounced in the quiet respiration of infants, are often entirely in abeyance in adults, points to the conclusion that these broncho-motor phenomena are most marked in early life, or in dyspnœa. Nevertheless, the indirect evidence of these rhythmical bronchial contractions appears to be fairly conclusive.

If in a dog one vagus nerve in the neck be divided and the central end stimulated, the bronchi of both lungs contract. If, however, the dog be deeply anæsthetised by ether, stimulation of the cut vagus (central end) causes dilatation of the bronchi. The experimental evidence on this point was sufficiently convincing to lead to the statement by Landois and Stirling that "it seems plain that the vagi contain centripetal or afferent fibres, which can cause both expansion and contraction of the bronchi."[1]

With these facts admitted, it has yet to be shown that the bronchial dilatation and contraction is *rhythmical*, and synchronises with inspiration and expiration.

(1.) It is generally conceded by physiologists that the

[1] *A Text-Book of Human Physiology*, 4th ed., vol. i., 1891, p. 189.

respiratory centre consists practically of two centres alternately in activity—an inspiratory centre and an expiratory centre; and, further, that running in the pneumogastric nerves are accelerating or inspiratory fibres, which normally come into action when the lungs are diminished in volume, *i.e.* at the end of expiration, and inhibitory or expiratory fibres, which normally come into action when the lungs are expanded at the end of inspiration. But none of the physiological text books, as far as I know, refer to a corresponding rhythmical dilatation and contraction of the bronchi (which seems a natural inference), with the exception of Foster,[1] who states that it is uncertain whether there exists a rhythmic contraction of the trachea and bronchial passages effected by means of the muscular coat, and synchronous with the respiratory movements of the chest.

(2.) The movements of the vocal cords during respiration are not without significance, for the glottic aperture may be regarded as a portion of the respiratory tract, more highly specialised for the purposes of phonation. This statement is supported by the fact that in birds the specialised phonatory portion of the respiratory tract is lower down at the bifurcation of the bronchi. The glottis manifestly dilates and contracts during inspiration and expiration, and in children even during quiet respiration. It is worthy of note here that experiments by Hooper, of Boston, and by Semon and Horsley agreed in showing that when various animals were deeply narcotised by ether, stimulation of the peripheral end of the divided (as well as of the undivided) recurrent nerve resulted invariably in abduction of the vocal cords, in contra-distinction to the adduction which was invariably produced by the similar stimulation of the recurrent in animals not deeply under the influence of anæsthetics.

Further, the close analogy between the glottic muscles and those of the bronchi is suggested by Rosenthal's observations,[2] that the inhibitory nerves, which affect the respiratory centre, run in the superior laryngeal nerve, and also in the recurrent laryngeal, to the respiratory centre. The superior laryngeal nerve contains

[1] *A Text-Book of Physiology*, 6th ed., part ii., 1895, p. 578.

[2] Landois and Stirling, *op. cit.*, vol. i., 1891, p. 821.

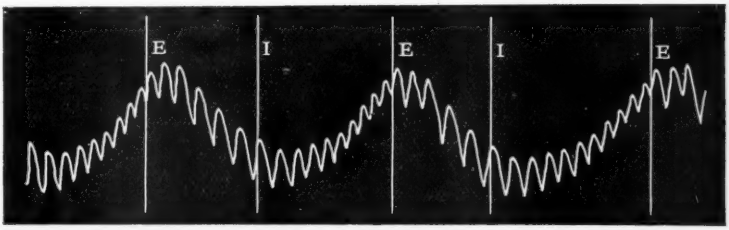
a large number of inhibitory respiratory nerves, or nerves which cause arrest of the respiration in expiration. We become aware of this when a foreign body enters the larynx, the strong expiratory effort and laryngeal spasm causing cough and expulsion of the body. On the other hand, the main trunk of the vagus contains afferent fibres, stimulation of which causes acceleration of respiration with strong inspiratory effort, and which may be arrested in the position of extreme inspiration.

Since stimulation of the expiratory fibres and the phase of extreme expiration is known to be attended with bronchial contraction, it seems probable that the stimulation of inspiratory or accelerating fibres and the phase of inspiration is attended with bronchial dilatation.

(3.) If vagi nerve fibres do cause dilatation and contraction of the bronchial tubes, synchronous with inspiration and expiration, we should find some evidence of such rhythmic bronchial movements if the vagi are cut. Hence, after section of both vagi inspiration is long and deep, but expiration is short and active, and is followed by a pause, so quickly is expiration effected; whereas before section the inspiration is shorter than expiration. Some factor which caused expiration to be prolonged as compared with inspiration, has been removed by section of the vagi, and I suggest, as the explanation, that before section of the vagi the smaller bronchi dilate on inspiration, and contract on expiration. This would cause a higher air tension in the alveoli to be maintained, and, as a consequence, the *rate* of oxygen and carbonic-acid disassociation to proceed more rapidly than it would if the inspired air was emptied out of the chest as readily and quickly as it entered. Hence we hear normally the short inspiratory vesicular murmur during the whole inspiration, but the expiratory vesicular murmur only towards the commencement of expiration, for after bronchiole contraction the air escapes so slowly that, except in pathological conditions, no vesicular murmur is audible.

While such rhythmic contractions of the bronchioles, like those of the glottis, are probably slight and relatively unimportant in quiet respiration, they would obviously be more pronounced and of greater physiological value during forced respiration, as for instance in running or on exertion.

(4.) We have in the respiratory undulations of the Traube-Hering curves very strong evidence that the bronchi contract and dilate rhythmically in the manner suggested. The arterial pressure undergoes regular rhythmical variations, owing to the rhythmical action of the respiratory centre on the vaso-motor centre. We have then experimental evidence that while the respiratory centre is rhythmically sending the impulses of inspiration and expiration, the neighbouring vaso-motor and cardio-inhibitory centres are acting in unison, so that their influence on the arterial tension and the heart respectively waxes and wanes rhythmically with each respiratory movement.



CAROTID BLOOD-PRESSURE TRACING OF A DOG. (STIRLING.)

I = commencement of inspiration; E = commencement of expiration. The respiratory undulations are due in part, at any rate, to a stimulation of the vaso-motor centre, which runs parallel with the respiratory movements, and which causes the arteries to contract, with consequent raising of the arterial pressure. The smaller number of pulse-beats during the greater part of expiration is due to the activity of the cardio-inhibitory centre in the medulla, this centre being comparatively inactive during inspiration.

N.B.—Dog under simple anæsthesia without artificial respiration, and vagi not divided.

Now, inasmuch as we have evidence in the respiratory undulations in Traube-Hering curves that the respiratory centre actually induces rhythmical *vaso-motor* impulses through a *neighbouring* centre, we have very good reason to believe that it induces a corresponding *broncho-motor* influence *in its own particular territory*, and the evidence on this point becomes almost conclusive when we observe the influence of the respirations on the laryngeal centre is such as to cause rhythmical abduction and adduction of the vocal cords.

(5.) At birth, before respiration has occurred, the lungs are solid and in an atelectatic condition, and at the first breath the

air inspired has to overcome the adhesion of the surfaces of the bronchial mucosa and of the alveolar epithelium. It is only after some time has elapsed that the lung is fully expanded; and while expiration with a partially-closed glottis, as in crying, must of course aid in the alveolar dilation, the pulmonary expansion, which occurs in spite of the tendency of the lungs to contract, is probably aided by the bronchial contraction during expiration, otherwise the chest would tend to remain collapsed if the air passed out of the bronchial tubes just as readily as it entered.

I submit there is reason to believe that, in children, the bronchioles dilate and contract rhythmically with inspiration and expiration, while in adults the expiratory contraction may be in abeyance during quiet respiration. That in deep inspiration and expiration, both in adults and in children, the expiratory afferent impulses are more pronounced, and inspiration and expiration are associated with bronchiole dilatation and contraction.

That in so-called bronchial spasm of asthma and acute bronchitis the bronchi dilate and contract as in normal infantile respiration, but that the contraction phase is excessive and prolonged.

That excessive bronchial expiratory contraction is the cause of emphysema in asthma and in bronchitis, and that chronic hypertrophous emphysema is similarly induced.

A CASE OF BANTI'S DISEASE, WITH AUTOPSY.

BY

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THE case is as follows:—

Laura B., æt 19, a servant. She had always lived in the country, and came of a healthy family. She had never had any bad illness. Four years previously she noticed an increase in

the size of her abdomen, and on being examined this was found to be due to an enlarged spleen. Since then she had suffered from weakness and anæmia; once she had a very severe attack of epistaxis, which lasted for two hours. She had always been a teetotaller.

Twelve days before admission she vomited nearly half a pailful of dark blood, and eleven hours later a further quantity, not so much as the first. She had no pain, and has never suffered from pain in the stomach or bowels, nor from dyspepsia or vomiting. Two days before the attack the catamenia, which had been absent for eight months, came on in a normal way. Occasionally, about once in two or three months, she had had profuse sweats at night. Except for symptoms referable to anæmia, *e.g.* shortness of breath, palpitation, pallor of face, and slight œdema of ankles, she made no other complaint.

On admission, February 24th, 1902, she was white and thin. The skin showed some sparsely-scattered, greyish pigment spots. Pulse, 134; small, regular, and weak. Hill and Barnard's sphygmometer indicated 120 on the scale. The breath had a peculiar, faint ethereal odour. Blood, pale; red cells, 1,171,000; white, 7,473. Hæmoglobin, 12 per cent. The red corpuscles were extremely pale, of all shapes and sizes, with some poikilocytes. Chief point in stained specimen was a moderate increase in large and small lymphocytes.

On examination, lungs healthy. Heart's apex was in sixth space, half-inch outside nipple line. A wavy impulse extended from second to sixth space. The left ventricle was dilated. The first sound at the apex was modified, and accompanied by a systolic murmur, audible at the lower angle of left scapula. Some ascitic fluid present in abdomen. The lower edge of the liver was not felt, the liver dulness reaching only to a finger's breadth above lower border of ribs. Stomach area of resonance obliterated. The spleen was enormously enlarged, firm and hard, not tender, smooth, and its notch plainly felt. It reached from the seventh rib above to close upon the iliac crest below, and forwards an inch to the right of the umbilicus. A soft souffle was audible over the spleen, but no friction sound. The urine was pale, 1,015, and contained a slight trace of albumin; no sugar; no casts; a few cystals of oxalate of lime. No retinal hemorrhages. Treatment by rest in bed, and the administration of iron, arsenic, strychnine, and digitalis.

On March 4th. Blood examination: hæmoglobin, 12 per cent.; red corpuscles, 1,200,000, varying very much in shape and size; a very few nucleated red cells (normoblasts).

On March 12th. Heart dulness extended outwards nearly to anterior axillary line, and nearly two inches to right of sternum. Murmurs as before. Liver dulness began above at fifth rib, and its lower edge could be plainly felt below the lower border of the ribs. The spleen had increased in size, extending downwards to about two inches above the pubes. There was

marked œdema of the legs, and the ascites had increased. The skin had a clear waxy tint. In a stained specimen of blood, coarsely granular eosinophil cells numbered 4 per cent. of leucocytes; no myelocytes were seen, and only one or two nucleated red cells.

March 19th. Blood hæmoglobin, 14 per cent.; red cells, 1,320,000; white, 5,250 to cm.; differential count: polymorphonuclear cells, 58 per cent.; eosinophils, 3 per cent.; mononuclear lymphocytes, 39 per cent., of which 11 per cent. were large hyaline lymphocytes; 1 coarsely granular basophil cell; 1 myelocyte. No nucleated red cells seen in this specimen.

March 26th. Hæmoglobin, 20 per cent.; red cells, 1,600,000; white, 5,200.

April 4th. Over eight pints of blood-stained fluid removed from abdomen: it contained blood corpuscles, but did not coagulate. The heart sounds had a galloping rhythm. The spleen had still further enlarged, reaching the pubes below and extending to the right to line half way between umbilicus and anterior superior spine of ilium.

April 14th. Blood had a peculiar bright pink colour, and was very pale. Hæmoglobin, 22 per cent.; red cells, 1,900,000; white, 3,500. Differential count showed polymorphonuclear cells, 56 per cent.; small lymphocytes, transitional cells, and large lymphocytes, 43.5 per cent., of which about 18 per cent. were large lymphocytes, one myelocyte, and one eosinophil cell to 400. Red corpuscles varied in size; few or no poikilocytes, some stained darkly, degenerated. One nucleated red was seen. The puncture with a needle bled very profusely. Optic discs and retinæ very pale (anæmia), but not otherwise abnormal. The urine, besides containing a trace of albumin, showed a marked urobilin band. No bile was present in it.

On April 26th eleven pints of fluid were removed from the abdomen. The patient had improved, and the blood state had also improved, as the red cells were now 2,100,000 to cm., and the hæmoglobin had gradually increased to 28 per cent. Leucocytes, 5,000. Differential count showed same proportions. No myelocytes. The œdema had disappeared from the legs, and the spleen was slightly reduced in size; it still had the same characters, being hard, firm, smooth, and not tender. The heart murmurs were about the same, the dilatation less. The heart dulness did not extend over the right border of sternum, and only one-and-a-half inches to left of nipple line, whilst the pulsation over the cardiac area had diminished. The liver reached to the lower border of the ribs. The patient slept well, was comfortable and free from pain when propped up in bed, and had a good appetite. She was now taking tr. digitalis, ♏ xv., and liq. arsenicalis, ♏ viii. (the dose of the latter having been gradually increased) with iron, *ter in die*.

On May 2nd she had an attack of severe diarrhœa, which passed off, and the temperature rose to 100°. On May 4th and

5th the temperature rose to 105°. There were no rigors, and no lesion could be found in any part of the body to account for the fever. The temperature fell rapidly to normal on the 6th in the same unaccountable way. On May 10th the patient vomited five pints of blood, and died a few hours afterwards.

It should be added that throughout the illness, except as stated on May 2nd to 6th, the temperature was irregular, varying between normal and 100° F.; there was never any jaundice, nor any reaction for bile in the urine.

Owing to difficulty in getting leave, the *post-mortem* examination was not made until fifty-six hours after death. Body emaciated; profoundly anæmic. Each pleura contained ½ pint, the pericardium 4 oz., and the peritoneum 4 to 5 pints clear yellowish serum, which had not the peculiar bright colour seen in the exudations in pernicious anæmia, and did not give the urobilin band. The lungs were pale, rather rusty in colour, but not indurated; there was some hypostatic congestion; trachea and bronchi healthy. Heart, 13 ozs. Both ventricles were dilated, the right also hypertrophied. Valve segments, normal. Heart-muscle, pale; some excess of subpericardial fat, especially infiltrating wall of right ventricle. No fatty degeneration of heart wall or papillary muscles. Liver weighed 3 lbs. 7 ozs., smooth on surface; on section, a pale bright yellow colour, almost primrose, with a number of slightly raised rounded nodules, varying in size from a millet seed to a pea; these varied in number in different places: consistence slightly tougher than normal. The spleen was enormous, weighed 3 lbs. 13 ozs.; it was smooth, dark in colour, and the notch well marked. On section, it was a pale brick-red, smooth, not unduly hard; fibrous structure not obviously increased; the Malpighian bodies deficient in number. It contained one very large pale infarct. The capsule of the spleen was slightly thickened; a chain of enlarged glands, dark in colour, the size of a large bean or larger, extended from the hilum of the spleen along the upper border of the pancreas to the middle line. The pancreas was large, and rather hard; white in colour. The supra-renals were bright yellow, and their medulla almost diffluent (? *post-mortem* change). The kidneys—right, 5 ozs.; left, 6 ozs.;—were pale and anæmic on section, the capsules stripped well, leaving a smooth pale-yellow surface with injected stellate veins, otherwise they looked normal. No thymus was found. Thyroid large, on section reddish, and contained glistening material, somewhat resembling the organ in Graves's disease. Pharynx normal. The œsophagus at and just above the cardiac end was richly beset with dilated and varicose veins. The stomach was full of blood-clot: the hemorrhage had taken place from a small eroded surface amongst the large varicose veins at the cardiac orifice. No sign of ulcer, past or present, was found. The upper part of the intestine also contained a quantity of blood-clot. The intestines, large and small, appeared healthy. The

uterus and ovaries were normal. The marrow of the tibia appeared abnormally dark red in colour and free from fat; that of the ribs was healthy.

Microscopical Examination.—Pieces of the various organs were hardened in Müller's fluid, and subsequently in alcohol, and sections stained with hæmatoxylin, with hæmatoxylin and orange G. and rubin, with hæmatoxylin and eosine, by Van Gieson's method, and with osmic acid. Lungs, heart, pancreas, supra-renals, thyroid, and ovaries showed no abnormal changes. Spleen: The trabeculæ and connective tissue of the organ showed a general increase. The vessels everywhere, especially those running with the trabeculæ, and also the capillary vessels of the sinuses, showed chronic congestion. In places there were considerable amounts of blood pigment, not contained in cells. The small vessels of the pulp showed pretty generally proliferation of the lining endothelium; there was also an endo-capillaritis of some capillaries, the lumen of which was stuffed with cells. In some parts in the sinuses there were considerable numbers of large cells, with clear protoplasm and large round or oval nuclei not staining so deeply as small lymphocytes, these were apparently the large lymphocytes (pale hyaline mononuclears) of blood: it was doubtful whether these cells, which are normally present in the spleen, were in excess. There were no giant-cells, nor evidence of proliferation of endothelium of sinuses. The Malpighian bodies were very few in number; some were stuffed with lymphocytes, others contained much fewer, and possibly there was some excess of fibrous tissue in these latter. The vessels of the Malpighian bodies and trabeculæ were less affected than those of the pulp, but the endothelium in some appeared swollen. In gland from hilum of spleen the trabeculæ and framework of gland were thickened, the vessels injected, and there had been hemorrhage into some of the sinuses. In some sinuses there were many large cells with deeply-staining nuclei, a few of still larger size, which looked like large lymphocytes, contained more than one nucleus. Liver: In the portal canals there was a slight excess of a fine fibrillar connective tissue, with a moderate number of round cells. This was not universal, but more marked in certain parts; and where most marked it was encroaching on the liver lobules, cutting off peripheral liver cells, which in some cases were elongated, and in a few had just divided. The liver cells were cloudy, their nuclei stained normally. The central veins of the lobules were a little dilated, with some excess of connective tissue around them. Kidney: The only changes in this organ were that the glomerular capillaries were injected, and in some glomeruli the epithelium of the capsule and that overlying the tuft showed slight proliferation of cells, with a little exudation into the capsule, and slight thickening of it. These changes were slight only. There was also, in some parts only, desquamation and proliferation to moderate extent of epithelium of first part

of convoluted tubes. There was no reaction for fat with osmic acid in liver, kidney, or heart; and no iron reaction in liver, spleen, or kidney.

The only remark to be made in addition to the above description is that the changes in the spleen are slighter in character than one would expect from its enormous size, and that the Malpighian bodies might be regarded as *relatively* few, owing to enormous increase in the pulp. The slight kidney changes correspond to those found in excretion of a not very intense poison; and, taking into consideration the enlarged glands in hilum of spleen and the changes in the liver, they might be regarded as secondary to passage of a toxin.

This case corresponds, then, with Banti's disease in its essential features, which, according to Banti, are, clinically, profound and progressive anæmia with enlargement of the spleen, and secondary cirrhosis of the liver with ascites. There are frequent hemorrhages, especially gastro-intestinal and nasal.[1] According to Murrell, however,[2] Banti speaks only of a notable tumefaction of the spleen and also of the liver, and describes the following as essential features: (1) A progressive idiopathic anæmia; (2) Grave disturbance of all the organic functions; (3) Irregular fever; (4) Hemorrhage; and (5) a fatal termination. Briefly speaking, certain cases of splenic anæmia are attended in the late stages with ascites, with or without cirrhosis of the liver, and sometimes jaundice.

The special diagnostic features of splenic anæmia, it will be remembered, are: the presence of an enlarged spleen, often of enormous size, with anæmia rather of the chlorotic type, without any increase, but in many cases a decrease, of the white corpuscles, and tendency to repeated and large hemorrhages. The disease runs a very prolonged course, and occasionally may cease to advance, or be arrested for long periods of time. In most cases it is, however, progressive to a fatal termination, which may occur from hemorrhage, or from gradual exhaustion; and the termination may be attended with cirrhosis of the liver, giving rise to ascites: the latter is the particular variety of splenic anæmia generally known as Banti's disease.

Dr. Dreschfeld[3] considers that splenic anæmia includes a number of affections which have two symptoms in common,

[1] Barr, *Lancet*, 1902, ii. 493. [2] *Lancet*, 1902, i. 1177.
[3] *Brit. M. J.*, 1902, i. 719.

namely, anæmia and an enlarged spleen; that the splenic anæmia of adults, in which there are besides usually severe and repeated hemorrhages, is often only the early stage of Banti's disease, marked enlargement of the liver appearing at a later stage; though in several cases of splenic anæmia, which were evidently cases of Banti's disease that died in the early stage, the liver showed *post-mortem* distinct signs of cirrhosis. Professor Osler, in a recent paper before the Association of American Physicians,[1] said that some of his cases of splenic anæmia had lasted ten to twelve years. The blood changes had been those of a chloranæmia, with, in six or eight cases, an exceedingly low leucocyte count. In ten cases hemorrhages from the stomach had been a marked and characteristic feature. Pigmentation of the skin had occurred in seven cases. In the late stages there had been a change in the size of the liver—sometimes an increase, sometimes a diminution. Jaundice might be an early symptom, and was not necessarily associated with cirrhosis of the liver. Recurrent attacks of anæmia, with jaundice and ascites, had marked a recent case. In only one out of three spleens examined had the changes supposed to be characteristic of the disease been present.

Next, as to the blood in the cases described as splenic anæmia, the conditions found present considerable variations as regards number of red corpuscles. In some of Osler's cases above mentioned the number was as high as 4,000,000, and the hæmoglobin 30 per cent. In many other cases the number has been as low as 1,000,000, and in one case (Cabot) 384,000: possibly the differences may be partly accounted for by the low blood-counts having been made towards the fatal termination of the disease, and the high ones in non-progressive stages of it. Generally speaking, there seems to be a diminution of the red corpuscles, but in most cases not an excessive one, and a relatively low value of corpuscles in hæmoglobin; *i.e.* an anæmia of the type found in chlorosis. As to the white corpuscles, they seem to be never increased; and in many cases there is a leucopenia, with a relative increase of lymphocytes to polymorphonuclear cells: this was the condition in my case, and the

[1] *Med. Rec.*, 1902, lxi. 750.

later counts showed striking increase in the number of large lymphocytes or pale hyaline mononuclear cells.

With regard to gastro-intestinal hemorrhages, since they occur in cases in which there is no cirrhosis of the liver, they cannot be attributed entirely to congestion produced by this cause. In my case, however, the fatal hemorrhage is undoubtedly to be connected with the varicose veins at the œsophageal orifice; and in one other case on record death was due to bleeding from an ulcerated varicose vein in this situation. The frequent occurrence of epistaxis, and the observation noted above that the prick of a needle in my patient bled extremely freely, point to the alteration in the blood as an important factor in the occurrence of hemorrhage. It has also been suggested by Osler that the hæmatemesis is mechanical, and due to venous engorgement of those areas of the gastric mucous membrane which are drained by the vasa brevia and gastro-epiploica sinistra veins, which again open into splenic vein passing through gastro-splenic omentum.[1]

Ascites has been present in some cases without cirrhosis of the liver. In the above case, the cirrhosis of the liver was in an early stage, and would seem insufficient to produce such a large amount of ascites, but one must remember that here there are other factors at work. There is the condition of the blood, with its influence upon the nutrition of the capillary walls, probably favouring transudation of fluid; and there is the dilated and weak heart, causing stagnation in the venous circulation. These conditions, each of which alone might not be adequate to produce ascites, in co-operation might easily do so. In other cases, towards the end of the disease, the same factors would be at work, and the occurrence of ascites may be thus accounted for, even when the degree of cirrhosis is small. Possibly in my case there was a further factor, in that the enlarged glands spreading from the hilum of the spleen may have compressed a branch or branches of the portal vein, and so aided in the production of ascites.

With regard to the cause of the cirrhosis of the liver in this disease, Banti[2] divides primary enlargements of the spleen

[1] *See* Rolleston, *Clin. J.*, 1902, xix. 407.

[2] *Riforma med.*, March 1st—5th, 1901; *Brit. M. J.*, 1901, i. Epitome, p. 93.

into the spleno-medullary leukæmic type, in which "the spleen alters in structure, manufactures leucocytes of unusual quality, and pours them into the circulation, radically changing the leucocytic ratio of the blood, besides elaborating certain soluble toxins." "In the other three types of splenomegaly the leucocytes are not increased. The altered function shows itself chiefly in the elaboration of certain toxic products which are poured into the circulation and act powerfully on the red corpuscles. In splenomegaly with jaundice a true hæmolytic action takes place; in splenic anæmia and in splenomegaly with hepatic cirrhosis . . . the splenic toxins, in their passage across the liver, sometimes induce fatty degeneration, sometimes cirrhosis of that organ, sometimes a mixed process is set up."

Chauffard [1] also insists on the hepatic cirrhosis being secondary to poisons formed in the spleen, and regards the portal vein as being formed of two branches, the intestinal and the splenic, either of which may convey poisons to the liver capable of inducing cirrhosis.

With regard to the nature of splenic anæmia, this is at present very obscure. The resemblances of the changes found in the spleen, in some cases, to those met with in the glands in lymphadenoma (Hodgkin's disease), as described by some authors, have led them to regard splenic anæmia as a lymphadenoma of the spleen; and it may be recalled that similar changes are met with in the glands related to the spleen.

There are difficulties, however, in regarding the disease as a primary one of the spleen. Professor Osler, indeed, says that the only point in favour of the view that the spleen might have something to do with this disease was that a certain number of cases had recovered after removal of the organ. Dr. James Barr's view is, that Banti's disease is due to a vaso-motor paresis of the splanchnic area, either in whole or in part, and that this paresis arises from disease of the visceral sympathetic ganglia. As a consequence, there is great engorgement of the abdominal viscera, especially of the spleen and liver; increased hæmolysis, with consequent oligochromæmia and oligocythæmia. The increased blood-supply to these organs eventually leads to

[1] Quoted by Rolleston, *loc. cit.*

fibrosis and lessened function. In support of this are the changes found by Banti in the semilunar ganglia and solar plexus, and also in the ganglia of the neck; *i.e.* lymphoid infiltration of ganglia, with degeneration of ganglion cells and nerve fibres leading from them.

There is still so much uncertainty about the exact position of Banti's disease in relation to the various forms of secondary anæmia and of splenic enlargement, and so much to be learnt of the etiology of these anæmias and of the causation of enlarged spleens, that at present it is impossible to come to any satisfactory conclusion as to the real nature of the disease and its position in nosology.

In conclusion, I may add that the absence, in such severe and long-continued anæmia as was present in the above case, of any fatty degeneration is worthy of remark, and forms a contrast, on the one hand to chlorosis, and on the other to pernicious anæmia.

REMARKS ON THE "LIGHT TREATMENT" OF LUPUS, VULGARIS AND ERYTHEMATOSUS, AND RODENT ULCER, &c.,

AS CARRIED OUT AT THE BRISTOL GENERAL HOSPITAL SINCE DEC. 9TH, 1901, TO THE END OF DEC., 1902.

BY

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AND

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IT will be observed that the period of time covered by the treatment is a little more than twelve months. At first only two lamps were used—Lortet-Genoud, made by Marshall and Woods, of London; but from May 23rd, 1902, two other lamps (constructed by Leslie Miller, of London) were added. The current used has been an interrupted one—five to ten ampères, about twelve volts, and the time of each sitting at the lamps

has been from five to twenty minutes. Several of the patients have had two, three, or four sittings on each day of their attendance, and especially where the extent of the affected parts was great, or the disease was situated in several parts of the body, —one part being treated at one sitting, another part at another sitting.

In many instances X-rays have been employed: often in cases of lupus vulgaris, where the parts were ulcerated, and very especially so in cases of lupus erythematosus, rodent ulcer, acne pustulata, and Paget's disease.

During the time there have been treated 42 cases of lupus vulgaris, 3 of lupus erythematosus, 12 of rodent ulcer, 1 of the late stage of actino-mycosis, 3 of acne pustulata, 1 of adenoma sebaceum, 2 of Paget's disease, and 1 of advanced carcinoma of the right breast and axilla.

Taking the lupus vulgaris cases first—16 males and 26 females have been treated, their ages varying from 4½ years to 73, and the duration of the disease from 1 to 45 years. From the above statements it will be readily conceived that many of the cases have been under various kinds of treatment for years, and many of them had been treated with caustic applications, or scraped, once or many times. Many of them, therefore, have been the accumulation, so to speak, of years. It was observed that the cases responded best to treatment that had never been more or less severely dealt with.

Before giving fuller details of some of the cases, the results so far obtained may be briefly summarised:—

Improved and continuing under treatment ...	26
Relieved—to be kept under observation ...	5
Relieved—in one or more parts, whereas other parts have to be treated...	4
Not improved	1
Unsatisfactory, through non-attendance ...	2
Cases under treatment, but time too little to judge of effect	4

Further details of some of the cases will be interesting:—

E. H., male, aged 21. Commenced treatment on December 10th, 1901.

Condition.—Very great thickening of upper lip, which is very red and much ulcerated, and hangs protrudingly over the lower lip. The alæ and septum nasi are ulcerated, and there is considerable loss of tissue; the nasal orifices are very contracted. The mucous membrane of the nose is involved, and this gives rise to an irritating discharge, which frets and ulcerates the parts below. There are numerous outlying nodules on the cheeks and nose. Has epiphora.

Duration.—Six years. Disease commenced on margin of right nostril. As the "light treatment" has not much effect upon mucous membranes, iodine solutions with cocaine were applied to the inside of the nostrils, which diminished the irritating discharge, and soon produced great improvement. Thyroid extract gr. v., twice daily, was also given for several weeks to reduce thickening.

Present condition.—There is no discharge from the nostrils; the upper lip is nearly as small as it should be; the ulceration is nearly healed; the redness is much less; and the nodules have disappeared almost entirely—some of them, quite.

E. B., female, aged 56.

Condition.—The whole of the face, from the hair on forehead to the chin, and from ear to ear, is one mass of darkly-stained deposits, with more or less scar-tissue intermingled. The *present* nose is stained a reddish-brown colour, which does not disappear upon pressure. Both lower eyelids are drawn down, exposing the mucous membrane.

History.—Forty-five years ago the disease commenced on the left edge and inside of nostril, then gradually spread. The parts were never scraped, but Mr. Cross skin-grafted the lower eyelids. Later on in life a large part of the nose perished, so about thirteen years ago the late Mr. Greig Smith restored the nose by forming one from the right arm. He was nothing if not artistic, and the symmetrical and consistent pug-nose which he designed was as suitable to the face as if Nature, in her best mood, had created it.

At that time Dr. Harrison happened to see this case, with Mr. Greig Smith, in the Infirmary, and little did he then anticipate that this excellent plastic work would be, in the course of time, mysteriously attacked by the devouring element, and become an object for "light treatment" at the Bristol General Hospital. Surely this is one of the most curious cases on record!

Present condition.—This case has been well treated; the woman has attended most regularly; and although the results have been slow, they are very hopeful.

J. W., male, aged 32. Commenced "light treatment" on January 9th, 1902.

Condition.—The whole of the face and neck, from forehead to below the clavicles, is one mass of erythematous scaling or

slightly ulcerated surfaces, showing little tendency to heal, and displaying a general light-brown staining. The left eye has been involved, leading to corneal opacity and almost blindness, and there is some opacity of the right cornea, but the sight is good. The eyelids and lips are much affected. There are two lupus patches on the back, one of them about four inches long, and they are very tender at times.

History.—When nine years old he had what was said to be an attack of erysipelas of the face (most probably erythematous eczema), caused by keeping on wet clothes for many hours, when he and other boy companions made a day's nutting of it in the country.

After the attack disappeared a red spot showed itself over the left eyebrow, and from this gradually, but too inevitably, the lupus developed.

He was brought up to the coach-painting trade, and he became a good and careful workman. As time went on the disease began to interfere with his work, and he became such an object that he rarely went out until dusk, and life was rather unhappy and miserable. He was well known to many practitioners who frequented Clifton Wood, where he lived. About twelve years ago he came under Dr. Harrison's care, and by treating him with lotions of hyposulphite of soda and dilute hydrochloric acid for some months he improved so much that he and several other patients, similarly treated, were shown at the annual meeting of the British Medical Association, at Nottingham, in 1892, as good examples of this mode of treatment. So much did he improve that he was able to follow his coach-painting occupation, and could earn from twenty to forty shillings a week at it.

Some years afterwards, as he did not get much better—*i.e.* as above stated,—he came into the Bristol General Hospital to be treated with tuberculin. He reacted in a very remarkable manner. Some improvement was made, but it was not maintained.

Later on he was attacked with Lichen ruber planus, one of the most marked and extensive developments of the complaint ever seen; it got well, but, unfortunately, without taking the lupus with it in its disappearing train.

For the last year or two—partly from some indifference on his part, and from being, consequently, rather lost sight of—he had been going back. The "light treatment" had scarcely descended to the plains of human ailments, being chiefly known (probably) in Alpine heights by its tendency to produce so-called frost-bites and skin-scaled faces. He commenced the "light treatment" on January 29th, 1902, and has been most regular and indefatigable in his attendance, with the satisfactory result that there is generally much clearing up of the face, there is much less scaling, and the skin is almost white in patches.

J. McC., male, aged 18. Admitted into the hospital for "light treatment" May 3rd, 1902.

Condition.—The first thing which strikes an observer on looking at the weakly and undersized boy is the peculiar constricted mouth, which is raw and ulcerated all round the orifice of the lips in a ring, and cannot be opened for more than a quarter of an inch. The teeth are very irregular and foul, but not "pegged." Inside the mouth the mucous membrane is ulcerated with lupus deposits; the eyelids are ectropic and bound to the conjunctiva in places, and speckled with numerous small cysts. The aspect looks like lupus attacking a boy afflicted with congenital syphilis.

History.—Little is known of his history: he is an orphan in charge of the Bath Guardians, who have obtained his admission into the hospital to give him the benefit of the "light treatment."

Treatment.—He has thoroughly undergone the "light treatment," and has had internal remedies as well, with the result that his mouth is almost completely healed, the eyelids are better, and the mouth inside is much improved by the removal of the useless teeth, or some of them, and the future looks more hopeful for him.

F. H., female, aged 30. Admitted August 4th, 1902.

Condition.—On both cheeks, nostrils, tip of nose, and upper and lower lips are masses of hypertrophied lupous tissue. The lips, especially the lower, are pendulous and very ulcerated, and almost repulsive in appearance; the tongue, roof of mouth, and gums are also much affected; the left temple and the chin are involved; and about four inches above the left elbow is a lupus patch. The left little finger is affected with tubercular dactylitis, and has discharging sinuses.

History.—Began about twelve years ago on the right arm near the elbow. It was treated with ointments, and healed up, leaving only a purplish-looking mark. A few years ago she was under Dr. Harrison's care, when the face was affected, but not so severely as now, and the left elbow. Two years ago she lost use in the right arm and leg, which came on with a shaking sensation, but there was no paresis. After this attack the face and mouth became much worse. The present appearance of the lips and mouth is really very repulsive.

General condition.—Spiritless and rather depressed, but takes food well. General health, otherwise, fairly good, and there has been no loss of weight.

Treatment.—As she lived away from Bristol she was admitted as an in-patient. "Light treatment" for sixty-four days—two or more places at a time, fifteen minutes each sitting. Lotions applied at first, and X-rays on three occasions greatly improved the ulcerated condition of the lips. She also took with benefit thyroid extract. As she wished to go home for a time, she left the hospital on October 17th, 1902, very much improved; but unquestionably the treatment should be continued.

Three cases of lupus erythematosus have been under observation. This seems a very small proportion of cases; but this complaint in its usual sense is by no means common in this part of the country. Two of the cases improved, but one of these not much until the X-rays were also used. The third case was unsatisfactory, through indifferent attendance.

Twelve cases of rodent ulcer have been treated, chiefly with X-rays, and the results in most of these cases have been markedly beneficial. Seven occurred in males and twenty-five in females. The youngest age is 23; but there was a little doubt about this case, and being a seafaring man he disappeared. The next youngest was a female, 36, who had an ulcer just outside the outer canthus of the left eye, and there was then a history of nine years' duration. The greatest age was in a female, 73, with six months' history, and a man, 72, with fifteen years' history, which case is given more fully just below. Some of the cases improved very rapidly.

The case of H. L., a farmer, aged 72, is one of the most remarkable we have ever seen.

Condition.—Extensive destruction of superior maxilla, nose, and cheeks. The upper lip is entirely destroyed, and the superior surface of the maxilla, the central incisor teeth being exposed for their whole length. Half of the nose (septum and alæ) is gone. The ulceration is extending to the inner canthus of left eye, downwards to lower lip on the left side, and into both cheeks—the left more involved than the right.

History.—Fifteen years' duration. Began as a small spot between cheek and nose on left side.

General health.—In spite of this awful affliction, he has most wonderful pluck, and says he "feels as young as 40."

Treatment.—He has been treated with X-rays since October 25th—eighteen times to present date—with the result that after the first few exposures he had considerable pain: later, this disappeared, and now he gets occasional attacks of numbness in the face and left eye. The extensive, ulcerated, and weeping surface is now quite dry and no longer foul, and epithelium can be detected growing in from the edges so as to cover over some of the raw parts.

Of these twelve cases of rodent ulcer, five are now under observation before being pronounced cured. One of these latter is of interest.

E. C., aged 73, female, on February 22nd, 1902, presented a

typical rodent ulcer, of the size of half-a-crown, on the right side of the upper lip, which was puckered up so as permanently to show the right upper canine tooth. The ulcer extended upwards on to the cheek and encroached upon the ala of the nose. The whole thickness of the lip was involved, but there was no perforation. The edges were dense, everted, and in places pigmented a dark, bluish-black, bringing to mind a melanotic tumour. There was very little discharge. It was of twenty years' duration and had had no surgical treatment. Since February, 1902, patient has had thirty-eight applications of the rays—frequently at long intervals, owing to her being frail and often unable to attend the hospital. At present the ulcer has completely healed over, and the raised edges, which gave more trouble to remove than the ulcer itself, have now disappeared; though on her last appearance there was a little scaling where the last part of the edges had been. There is some puckering of the scar left, but it certainly is no more marked than it was when first seen.

Some other cases of interest are three instances of acne vulgaris, which have not yielded to ordinary treatment. Considering the use of the X-rays in ulcerated lupus, and indeed in all cases of ulceration, it was thought that a good effect might follow in these cases; and although it is currently reported that the X-rays have no bactericidal properties, yet undoubtedly their use has been justified. Together with this treatment, the comedones were expressed energetically and pustules punctured; but in the first of these cases there was abundant evidence that the good effect was not entirely due to this adjuvant treatment.

W. T., aged 18, male, had extensive pustular acne upon his forehead, nose, and cheeks, which, for the last four years, had rendered him such a spectacle that he had had the greatest difficulty to obtain any employment at all. He was treated on twenty-two occasions between August 13th and December 12th, about twice a week, and at present he shows no pustules or comedones, and his skin, though much scarred from old pustules, is supple and much smoother.

E. H., male, aged 25, was admitted on October 13th for very extensive and severe acne pustulata of the back, from the back to the sacrum. He had suffered from it for nearly nine years, and in spite of active expression of comedones and pustules and antiseptic treatment, was none the better. He could carry nothing on his back, and sometimes could hardly bear his clothes on. Many of the pustules had undermined the skin in all directions, often joining one another. In a fortnight, after four applications of the rays, he was able for the first time to bear hard pressure on the back, and could wear his clothes in

comfort. More pustules appeared later; but gradually the skin is growing more healthy, and the large craters left by the undermining pustules are nearly all healed up, after thirteen applications extending over three and a-half months. An occasional pustule is seen now, but is instantly dealt with.

The third case, C. M., male, aged 17, is at present incomplete; but enough has been done to show that this case will react as the others have done. Already patches of skin tracked with small sinuses and crowded with comedones are clearing and healing.

The cases of Paget's disease are very interesting and have been greatly benefited, but the fuller history must be reserved for another summary.

PERFORATED TYPHOID ULCER.[1]

BY

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THE subject of perforation in typhoid fever is one of perennial interest both to the physician and the surgeon. Upon the early recognition of its occurrence by the physician depends the success of interference by the surgeon.

It is a field in which the surgeon has been more often baffled than victorious, and one in which he has but a limited opportunity of enlarging, and profiting by, his own personal experience; for perforation is not a condition very frequently met with, as it occurs in only 2 to 5 per cent. of all cases. Probably about fifty cases pass through each of our Bristol hospitals in the year: this means an expectation of from one to three perforations; and these, divided between four or five surgeons, render the chances considerably against any individual surgeon having to deal with a single case in the course of the year.

Such being the case, we are principally dependent on the study of the cases of others for the advancement of our

[1] Read before the Bristol Medico-Chirurgical Society, January 14th, 1903.

knowledge in the methods of diagnosing and dealing with this condition. And for these reasons I think the details of a case I had recently under my care will be of some interest, and perhaps profit, to record:

The patient, a strong, healthy man, æt. 27, was admitted into the Bristol General Hospital, under the care of Dr. Odery Symes, on August 29th. His temperature was then 104°; he had been ill for a week, but had not stopped work. On September 3rd he was seized with severe abdominal pain at six o'clock in the evening, and had a rigor; the pain got better later on, but returned at intervals until midnight; it was not so severe again as at first, and he had intervals of sleep between the attacks of pain.

I saw him, with Dr. Symes, at 2 a.m. on September 4th. He was not then complaining of much pain; he was lying on his right side, and did not appear to be in any pain or distress. His colour and general appearance were good; pulse, 100, good quality; temperature, 101°; the abdomen was distended, but tympanites had been marked earlier in the case; the liver dulness was absent; the abdomen moved universally with respiration, but the movements were somewhat limited, and more markedly so in the right lower part; there was some fixed tenderness about McBurney's point, not very acute; also a little general tenderness; he was sweating freely.

In view of the sudden onset of intense pain, together with the persisting though slight tenderness, and absence of liver dulness, I advised an exploratory operation, although there was no collapse nor increase in pulse frequency.

I opened the abdomen by an oblique incision over the right iliac fossa. On incising the peritoneum, about eight ounces of turbid yellow fluid escaped under some pressure; this collection appeared to be almost shut in by the neighbouring coils of intestine, between which, however, there were no adhesions. The coils of gut were injected; but there was no deposit of lymph on them, except in the immediate neighbourhood of the perforation, which was easily found at the lower end of the ileum. The hole was about the size of a goose-quill, and situated in the centre of a much-thickened patch; it was partially covered by a process of adherent omentum, from beneath which a small amount of intestinal contents was escaping. I cleaned the intestine in the neighbourhood with sponges; also the pelvis, in which there was some turbid fluid. I did not find any neighbouring patches which showed signs of perforating.

On attempting to close the perforation by folding in the whole ulcer, I found it impossible to do so, as the induration involved so much of the circumference of the bowel; sutures passed through the indurated part cut out immediately when

tied. It was found necessary, therefore, to close the hole by lightly-tied sutures, and leave the sutured part under the wound with a gauze drain. A tube was passed into the pelvis.

The patient was no worse for the operation; his temperature, taken a few hours later, had dropped to 97.4°, and about twelve hours afterwards began to ascend again to its former level. No symptoms of peritonitis developed. There was free discharge from the wound for ten days, when he died from the continuance and severity of the typhoid fever.

Post-mortem examination showed that no peritonitis had developed, nor had any second perforation either threatened or occurred. The diseased portion of gut was adherent to the abdominal wound around the base of the ulcer, which was sloughy; and a fæcal fistula was present, although no actual fæcal matter had so far been observed in the discharges.

The result of operation in this case was successful, in so far that the patient was saved from peritonitis and death from the effects of perforation. Had he not died eventually from the progress of his disease, he would presumably have recovered with a fæcal fistula, which would have closed, or could have been dealt with later on.

Some recent statistics emphasise very forcibly the importance of early interference. The recoveries after operation undertaken during the first twelve hours were 40 per cent.; during the second twelve hours, 10 per cent.; and after twenty-four hours no cases recovered.

To lower the hitherto great mortality, we must therefore operate within the first few hours; and the question here presents itself, What are the indications for operation in these first few hours? That this is not an easy one to answer is shown by the number of cases that have been left until too late, by our own experience when the question has had to be answered by the bedside, and by the way it is treated of in the leading works on medicine. On consulting these, we learn practically nothing about the early indications. We are told of sudden acute pain and tenderness, collapse, sudden fall of temperature and the symptoms of general peritonitis are given in detail; but these are of no use for the purposes of the surgeon. Judging from the symptoms described in the recorded successful cases, I think we may say that the only constant early symptom is the sudden onset of pain, with localised and persisting

tenderness; but unfortunately pain and tenderness occur apart from perforation, and it is often far from easy to differentiate between the pain of colic and that of perforation.

The surgeon is here much handicapped, in that, since he does not have the opportunity of observing and becoming familiar with the ordinary course of the disease, he is not so well fitted to make this early differentiation. It may be said, as a rule, that the pain of colic tends more to move about, to be less persistent, and is less likely to be associated with tenderness. In my case the pain was very acute at first, recurred at intervals, and was accompanied with tenderness, which, though slight, was persistent and localised.

Another symptom which is generally present early is some fixity of the abdomen: this was present in a slight degree in my case. The combination of pain, tenderness, and some localised fixity will, I believe, be found to be a constant indication for exploration.

The next consideration is the pulse: there is generally a rise in the frequency, which continues to increase. This is a valuable indication, but was absent in my case.

Absence of liver dulness is of undoubted value in cases where it is first noted at the onset of other symptoms; but to make this symptom of value, it should be a routine practice to estimate the line of liver dulness daily, especially in cases associated with tympanites.

Collapse, one of the classical symptoms of perforation, if absent, must not be waited for: occurring early, it generally indicates a large perforation, with extensive extravasation into the abdomen. In my case the sudden drop in temperature, which may have represented collapse, did not occur until several hours after the operation. When the perforation is small, there is not much extravasation at first, and what does escape probably remains localised for a few hours until the collection has so increased in quantity that it suddenly displaces the coils of intestine that held it confined, and is rapidly diffused through the peritoneal cavity. This would, I believe, have been the sequence of events in my case, had it been left. On opening the abdomen, there was a collection of about eight ounces of

fluid, apparently localised, and contained between coils of intestine without any adhesions: had the pressure become much greater, this collection would doubtless have pushed aside the protecting coils of gut and become diffused through the belly cavity. This occurrence would in all probability have been attended by signs of collapse; but we must endeavour to anticipate such an event.

Sweating—not the cold, clammy sweat of collapse, but a profuse perspiration—occurred in my case, and has been noted in others. I cannot say how often it occurs, but some observers lay stress on this as an early symptom. Sweats undoubtedly occur at times in some cases of typhoid, but they are the exception: it is therefore a symptom to be observed.

A rigor occurred at the commencement of the symptoms in my patient, and has been noted in other cases; but rigors from time to time are a feature of some attacks of typhoid: perhaps an isolated rigor, in a case where rigors have not occurred before, may be of some significance.

Vomiting has been noted as a symptom; but is, I believe, rare apart from peritonitis.

From the foregoing considerations, I think we may say that if we are to anticipate the graver complications of perforation by early surgical interference, we may take, in the present state of our knowledge, the following indications as demanding operation: Pain, localised tenderness, and fixity of part of the abdomen. The severity of the pain and tenderness will vary with the condition of the patient: the worse his condition, and the more apathetic he be, the less marked will be his symptoms. We shall probably be able to elicit some one or more of the other symptoms enumerated above, and, taken in conjunction with these three principal indications, they will afford us valuable evidence.

I call these, not symptoms of perforation, but indications for operation; for, as a rule, we cannot positively diagnose a small perforation so early after its occurrence. All that we can say in many cases is, that the symptoms are sufficiently suspicious to justify an exploratory incision. If we act on these principles, we shall doubtless on some occasion open an abdomen needlessly;

but if we do, the risk to the patient is small, and not to be compared with the risks of an undetected perforation. It is, moreover, a procedure by which we shall not lose any lives, but probably be enabled to save many. Apart from perforation, I believe that pain and tenderness often indicate a local peritonitis over the base of an ulcer, which in the end, however, may escape perforation; but the risk of perforation in such a case must be very great, and by an early exploration we shall be able to anticipate and prevent the occurrence of perforation.

The anæsthetic has been urged as a serious objection, especially when pulmonary complications exist; but an anæsthetic, though desirable, is not necessary. A considerable number of exploratory incisions have been made, especially by American surgeons, under local anæsthesia, and ulcers have been stitched up, with very little discomfort to the patient, with aid of eucaine for the skin incision.

We can considerably lower the present mortality of these cases; but we shall never obtain a very high percentage of recoveries, because of the very nature of the cases with which we are dealing. To begin with, typhoid itself has a mortality of 10 per cent. or over; then perforations in patients already suffering from profound toxæmia pass unobserved—and even were they detected, the patients are beyond the aid of surgery. Large perforations and extensive fæcal extravasation must nearly always be fatal.

Multiple and recurrent perforations add considerably to the difficulties; but our methods of dealing with these are probably not yet perfect. The practice at present, in cases where the ulcer cannot be effectually closed by suture, is to be satisfied with the chances of a fæcal fistula or to establish an artificial anus. The question of resection must always present itself in these cases, especially in cases where there is a considerable length of bowel much infiltrated, more than one perforation, and perhaps several areas where perforation seems imminent. Packing and isolation of so large an area seems almost hopeless, though such a case [1] has been recorded where the cæcum and large part of the ileum were badly affected. After packing off

[1] *Ann. Surg.*, 1901, xxxiii. 645.

all the diseased bowel from the rest of the peritoneum, the patient recovered with a fæcal fistula.

Resection means generally a more or less prolonged operation, and addition to the shock, and rapidity of operating is of prime importance in these cases. But I believe that, by our improved technique and more rapid methods of resection, we could, in many cases perhaps, more rapidly resect a portion of bowel than stitch up several ulcers and deal with one or more areas of impending perforation,—a procedure perhaps, after all, to be of no avail if more diseased areas give way later on.

Perhaps the greatest argument against resection is, that in many cases it must involve a considerable portion of the ileum and the cæcum, because one would have to get beyond the area of ulcerations. No successful cases of resection have been recorded so far; but when we have so improved our powers of diagnosis that we can get the cases early, we shall be in a better position to improve our methods of dealing with the lesions found.

Our present position as regards the question of resection is probably this: Most cases can be satisfactorily dealt with by suture, many cases are too bad to attempt it, but there is probably a certain percentage of cases in which it offers the best chance. But we can say nothing from experience on this point, as the method has not had a trial; but I believe that, by getting suitable cases sufficiently early, we shall feel ourselves justified in giving it a trial.

The discussion on this paper is reported on page 88.

ON SOME OF THE INITIAL SIGNS OF PLEURISY.[1]

BY

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I WISH, in the following notes, to discuss some of the initial signs of pleurisy which are not described, or but barely

[1] Read at the Meeting of the Society, January 14th, 1903.

mentioned, in text books on medicine, though of considerable practical value and theoretical interest.

Hæmoptysis is occasionally one of the initial phenomena of a simple attack of pleurisy. With the onset of fever, pain in the side of the chest, and other symptoms, hæmoptysis may occur. Bright red, frothy blood may be expectorated, often accompanied by a little mucus. It is usually in small amount—a couple of drachms or so in the twenty-four hours. This hæmoptysis rarely lasts more than one day, though exceptionally it may go on in diminishing quantity for two or even three days.

The cause of this occasional hæmoptysis is a little doubtful. It is well known that a pleuritic rub and hæmoptysis may be among the first signs of pulmonary embolism; but in the cases I have mentioned an infarct was out of the question, for the heart was in each case normal, and there was no evidence of thrombosis in the general venous system. Next, a patch of pneumonia suggests itself as the explanation of the phenomena, but the clinical course of these cases is not that of a pneumonia; the blood expectorated is bright red, and it is an initial symptom only, whereas the rusty-coloured tenacious sputum of pneumonia is brought up on the second day, at earliest, of the disease. Pleurisy over a tubercular lesion of the lung is another possible explanation; but though an apical rub with hæmoptysis may be the only signs in the early stage of a case of phthisis, the cases described above are instances of basal pleurisy: the physical signs over the apices were normal, and the subsequent clinical course of the cases has not been that of a basal tubercular lesion.

It may be concluded, then, that pulmonary embolism, pneumonia, and an associated pulmonary tubercular lesion are not the causes of this transient hæmoptysis in pleurisy. It is probably due to hyperæmia and rupture of capillary vessels in the tissue of the lung immediately underneath the area of inflamed pleura.

The symptom is not of any bad significance; it speedily ceases, and it is of importance only in so far as, if the possibility of its occurrence is not known, it may lead one

to unnecessarily suspect a graver lesion than is actually present.

The existence of pain in pleurisy is well enough recognised, but it is insufficiently appreciated that the pain often radiates along the nerves of the chest. Now, the lower six intercostal nerves pass into the upper two-thirds of the wall of the abdomen. It is therefore possible to entertain the opinion that peritonitis is present, and I have known cases where this was thought to be the case. This error is more easily made when the pleurisy is part of a pneumonia and the patient is seriously ill. The distinction, however, can be made by ascertaining that there is no tenderness of the skin of the abdomen or of the underlying peritoneum, and by finding the patch of pleurisy in the chest. On the other hand, if peritonitis as well as pleurisy be present, both peritoneum and pleura are tender on pressure.

The pain of pleurisy is not necessarily precisely over the pleuritic inflammation: all that it indicates is what intercostal nerves are implicated; and search must be made over the whole of the strip of pleura supplied by that nerve by palpating along the corresponding intercostal space, from the situation of the pain backwards towards the spine. An exact guide to the situation of the inflamed pleura is the area which is tender on pressure, and it is on listening there that a rub is heard. The skin itself is not tender; it may be pinched or pricked without the least pain, whilst the slightest pressure exerted on the underlying pleura is acutely painful. This tenderness on pressure often precedes the development of a pleuritic rub; thus there may be tenderness on pressure on the first day of the disease, and only on the succeeding one is a pleuritic rub audible. I think it may be said that a localised patch of tenderness in an intercostal space, which has suddenly developed, with pain, fever, and impaired costal movement, is very good evidence of commencing pleurisy. The tenderness does not last long, rarely more than two or three days, whether effusion follows or not. It is thus only an initial symptom.

I might say, in passing, that in the initial period of pericarditis there is similarly tenderness on pressure without

any hyperæsthesia of the skin; but that in this case tenderness on pressure is not so surely evidence of inflammation of the serous membrane as in the case of the pleura, for it may be found where there is simply distension of the cardiac cavities; for instance, after severe exertion and in angina pectoris. The two chief affections, other than pleurisy, in which there is localised tenderness on pressure on the thoracic wall, are intercostal neuralgia and arthritis of the costo-vertebral joints. The former is a late phenomenon in neuralgia, and can hardly be mistaken for pleurisy, but the latter may be fairly acute. The tenderness, however, is quite close to the spinous processes, over the joints. Further, it is not accompanied by the other features of pleurisy. In the only two cases where I have seen it, the arthritis was of rheumatic origin, and readily cured by the administration of salicylates.

It may, perhaps, be added that the occurrence of pain and tenderness in pleurisy and pericarditis is fairly good clinical evidence that the intercostal nerves send sensory filaments to the parietal layer of the serous membranes, though as yet they have not been anatomically demonstrated.

There are many other phenomena occurring during an attack of pleurisy which might be discussed, but those to which I have referred are of special interest as liable to lead to errors in diagnosis or to be misinterpreted.

The discussion on this paper is reported on page 84.

TWO CASES OF RUPTURED TUBAL PREGNANCY.

BY

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CASES of extra-uterine gestation would appear to be of not infrequent occurrence, and many cases are from time to time reported, yet they are always of interest; and these two cases, admitted to the Royal Infirmary within a fortnight of one

another, exhibit well the two varieties of rupture of the tube, and the satisfactory result of prompt surgical treatment in each.

It will be remembered that the Fallopian tube will not contain an impregnated ovum developing within its walls beyond the twelfth week. Some time previous to this, one of three things happens. It either aborts through the open ostium of the tube, or the tube ruptures into the peritoneal cavity, or gives way between the layers of the broad ligament. The two following cases are examples of the latter accidents.

Case 1.—Eliza S., æt. 34, admitted to the Royal Infirmary on the night of August 31st, 1902, complaining of severe pain in the abdomen, and passage of blood from the vagina. She had been married ten years, and had had two children, the younger of which was seven years old. She had not been pregnant for seven years. She had not menstruated for seven or eight weeks; but was always irregular, often going eight weeks without seeing anything. Three days previous to admission she had slight pain on the left side of the abdomen, which soon passed off; but the following day she was suddenly seized with severe pain in the lower abdomen, which doubled her up and made her vomit; and she had vomited several times during the last two days. On admission, the patient's appearance was expressive of great pain; her face was drawn and anxious. She was pallid and restless—pulse 120, temperature 99 F. The abdomen was extremely tender, and the parietes fixed and hard, especially over the left lower part. On vaginal examination, which was very painful, especially on the left of the uterus, the cervix was found soft, the os patulous, and the body of the uterus enlarged and tender,—all suggestive of pregnancy. Around the uterus was an ill-defined bogginess, but *no defined tumour*. There was secretion in the breasts.

On taking the results of the physical examination with the history, a pretty confident diagnosis of ruptured extra-uterine gestation, with bleeding into the pelvis and abdomen, was made, and operation performed shortly after admission. The usual incision between umbilicus and pubes was made. Blood could be seen through the peritoneum before that membrane was divided, and escaped in large quantity when the abdomen was opened. The hand was rapidly passed to the left side of the uterus, the symptoms having been most marked on that side, the tear in the tube was at once felt, and it and the ovary, which contained a recent corpus luteum, brought to the surface. These were ligatured off and removed. It was seen that the tube had given way close to its uterine end, and that the hole would admit the tip of the forefinger. The abdomen was then irrigated with hot saline solution, and all the blood and clot washed out. There was no sign of the embryo. The

wound was then closed. The patient recovered without a bad symptom, and was discharged at the end of a month.

Case 2.—Ellen S., æt. 30, came some distance from the country as an out-patient to the Royal Infirmary, on September 13th, 1902, complaining of loss of blood from the vagina. She had been married twelve years, had one child ten years old, and had not been pregnant since. About five weeks previous to her coming to the Infirmary, she was suddenly attacked with pain in the right iliac fossa, and since that she has had two similar attacks—one four days ago, and one on the day of admission. She dated her last menstrual period to the time the first attack of pain came on, some five or six weeks previously. Since this time she had lost blood almost continuously, but more so when the pains came on. On examining the abdomen, a large tender swelling could be felt in the right iliac region, apparently arising from the pelvis. *Per vaginam* the os was small and soft, and pushed to the left; the body of the uterus enlarged and tender. To the right of the uterus a mass could be felt bimanually about the size of an orange, tender and firm, and apparently connected with the uterus itself. The breasts had been enlarging and becoming tender; but no secretion could be obtained. A diagnosis of ruptured tubal gestation was made, and the patient admitted and operated on on September 15th.

On opening the abdomen, a large tumour, as big as a fœtal head, was at once seen to fill the right side of the pelvis, lying immediately to the right of the uterus, which was large and flabby. Over the top of the tumour, the greatly distended Fallopian tube could be seen, extending from the uterine end in an outward and backward direction, where it was adherent to the bowel and mesentery. The rest of the tumour lay between the stretched layers of the broad ligament, little space intervening between it and the uterus. This narrow piece was ligatured off in sections from above downwards as far as possible, and the peritoneum then divided across the tumour. The front part of the tumour was then shelled out from the broad ligament. In separating the dilated Fallopian tube from the bowel, to which it was very closely adherent behind, this part of the sac gave way, some clear fluid escaping, followed by a fœtus. The cord was clamped and the fœtus removed. The enucleation was then proceeded with, below and in front, and this part of the sac, when nearly free, also ruptured, and a good deal of blood-clot, together with the placenta and its membranes escaped. Several vessels were ligatured in the ragged cavity left in the broad ligament, but, a considerable amount of oozing continuing, the cavity was stuffed with gauze, one en of which was brought out at the lower end of the abdomina wound, which was closed in the usual way.

The fœtus corresponded to the end of the fourth month. It was five inches in length, a male: generative organs well

marked, head quarter whole length. Sac rather larger than a cricket ball. The placenta was fully formed.

The gauze was removed on the second day. A complete decidual cast of the uterus was passed on the fourth day. On the fifteenth day the breasts commenced secreting—rather an interesting point; and the patient was discharged cured on the thirtieth day.

The all-important point in these cases is the diagnosis; and to arrive at this correctly we must take into consideration most carefully every point in the history and symptoms. Now. tubal gestation is very liable to occur after long periods of sterility; and in both these cases the patients were young married women who had borne children, but who had remained sterile respectively for seven and ten years.

The next thing is, that on careful enquiry there is usually something abnormal about the menstruation—either one or more periods have been missed, or there has been some irregular hemorrhage, or hemorrhage may have been continuous from the last period up to the time of seeking advice. Again, shreds of decidua may have been observed with the discharge: and this is a point of great importance, for it must be remembered that in extra-uterine gestation, the uterus participates in the early changes of pregnancy: it enlarges, a decidua forms within it, and the cervix becomes soft and the os patulous. In the first case, the patient had seen nothing for two months, and then had an excessive discharge, accompanied by abdominal pain. In the second case, bleeding had been almost continuous since the last period, dated at about six weeks previously, when it came on accompanied by pain.

Thirdly, in a good many of the cases at any rate some of the signs of pregnancy are present. We have mentioned the missed periods; then there is the condition of the cervix and the uterus, the presence of milk in the breasts, and sometimes morning sickness. Some of these patients think themselves pregnant; more, I think, not. Neither of these patients believed herself to be pregnant. The uterus resembled an early pregnancy in each: milk was present in the breasts of one and not in those of the other. There was no definite morning sickness in either.

Now we have to differentiate between the intra-peritoneal and the extra-peritoneal rupture. In the former the symptoms are far more urgent—acute abdominal pain with collapse, and signs of faintness, not perhaps at first distinguishable from any other acute abdominal catastrophe, such as ruptured gastric ulcer, perforative appendicitis, twisted ovarian cyst, etc., etc.; but perhaps, from successive hemorrhages, the restlessness and pallor, with increased rapidity of pulse, will point more clearly to the fact that internal hemorrhage is going on. There is often very great pain in this condition; more so than one would expect perhaps, and most marked over the lower abdomen on one or other side. The vaginal examination is also very painful. It must be distinctly remembered that no tumour is present. Recently extravasated blood does not give rise to a tumour, and anything that one feels *per vaginam* may be very vague. Hence the great importance of careful consideration of history, as well as symptoms, in making the diagnosis.

In extra-peritoneal rupture, the symptoms are far less urgent, the tension of the layers of the broad ligament preventing any great extravasation of blood, and this bleeding not necessarily interfering with the life and subsequent growth of the fœtus. The three definite attacks of pain that occurred in the second case were no doubt caused by successive hemorrhages, yet the life of the fœtus was not interfered with. The rupture of the tube, in whatever position, is probably always accompanied by a discharge of blood from the uterus. In these cases a tumour is always present on one or other side of the uterus, and this is one of the distinguishing points between them and the intra-peritoneal cases. This tumour may be taken for an ovarian cyst, or a fibroid, or a tube distended from other causes; and here again, it is the association of important points in the history that is of help in the diagnosis. Whilst in some cases the diagnosis can be made with a fair degree of certainty, there are others in which all the evidence we can command leaves us in doubt.

We have finally to consider the question of operation in these cases. There appears to be a great probability that, if

the ovum be apoplectic at the time of rupture, and if it be discharged from the tube, no further hemorrhage will take place, and if the initial hemorrhage be not sufficient to kill the patient, she may recover without operation; and this especially would apply to the cases of extra-peritoneal rupture. As, however, we have no means of knowing whether a blighted ovum has been discharged through the rupture, as delay might mean death from recurring hemorrhage, and as the results of these operations, even when the patients are *in extremis*, are so exceedingly satisfactory, the proper line of treatment is to operate at once when rupture into the peritoneum is diagnosed. Again, when we remember the enormous risk to the mother of a fœtus developing between the layers of the broad ligament, and the increasing dangers and difficulties of operation with each succeeding month of pregnancy, one will advise operation as early as the diagnosis can be made. It was lucky that the second case was caught just at the end of the fourth month. The operation was sufficiently difficult, but would have been much more so a month later. It will be noticed that the placenta was placed below the fœtus.

My remarks have been based almost solely on what could be learnt from the two cases reported, and I have purposely avoided making any reference to tubal abortion.

In conclusion, I must offer my thanks to Mr. Prichard and Mr. Munro Smith for kindly allowing me to publish these cases, which were respectively under their care at the time I was House Surgeon.

Progress of the Medical Sciences.

MEDICINE.

Abscess of the lung following pneumonia forms the subject of two recent papers. The writers of both papers express their indebtedness for many of their facts to Eisendrath. The occurrence of abscess of the lung following pneumonia does not appear to be so uncommon as some physicians seem to think. Dr. Pye-Smith states in his article in Clifford Allbutt's *System of Medicine*, that he had never seen a case. Such experience must

be very exceptional. Eisendrath succeeded in collecting no less than 96 recorded cases from literature. It may be mentioned, in passing, that I have met with five cases in the *post-mortem* room. In four of these cases it is true that the abscess was not large, but in one the whole of the right lower lobe had broken down into pus. It is an interesting fact, however, that this complication of pneumonia is not very fatal, and consequently only a minority of the cases are seen in the *post-mortem* room. Thus in the 25 recorded cases of acute simple abscess collected by Eisendrath, there were no deaths. All the abscesses, however, cannot be classified under the acute simple form. When the abscess is of the acute gangrenous type, the prognosis is more serious; but even then not so serious as might be expected. Of 28 recorded cases only six died. Where the abscesses become chronic, however, a fatal ending is more frequent.

The following is Eisendrath's clinical picture of abscess of the lung following pneumonia: Some short time after the crisis there is a rise of temperature, which becomes remittent. The sputum becomes purulent, and there is distressing cough associated with expectoration of pus in large quantities. Should, however, the abscess cavity not communicate with a bronchus, there is little expectoration. There is in all cases loss of appetite and a rapid decline in strength. Physical examination is often disappointing. The abscess is generally in one of the lower lobes; but there are no typical physical signs. Dulness is generally present; while the respiratory murmur, vocal resonance, and fremitus are usually diminished; but there may be bronchial breathing. The most reliable sign is the presence of large moist râles, not infrequently metallic in character. Another striking feature is the variability of the physical signs: at one time dulness, and then a tympanitic note at the same spot. H. A. Hare,[1] the joint author of one of the papers, records a case of abscess of the lung occurring after pneumonia, which was under his own care. A young woman, after nursing a case of croupous pneumonia, became affected with the same disease. After passing through a severe attack of pneumonia the temperature failed to return to normal, a "pseudo-crisis" taking place on the ninth day. After this the temperature gradually became of the septic type, and "sweats and chills" followed. There was a good deal of emaciation associated with persistent cough. Thirty days after the beginning of the attack of pneumonia, during a violent fit of coughing, the patient brought up "considerably over a teacupful of pus," which was not offensive, but nearly suffocated her. The dulness which had been present was supposed to have been due to delayed resolution. The expectoration of pus continued, so that it was decided, after a consultation with Prof. Da Costa, to operate. This was done, but the abscess cavity was not reached. Three days later, however, what appeared to have been a second abscess, containing

[1] *Med. News*, 1902, **lxxxi.** 385.

about half-a-pint of pus, suddenly ruptured, and again nearly produced death by suffocation. Although the patient was at this time in a very feeble condition, gradual improvement took place; the temperature became normal on the 73rd day of her illness, and she was discharged on the 103rd day. She eventually regained perfect health.

Dr. McRae [1] also records two cases of abscess of the lung following pneumonia, in both of which an operation was performed. The first patient, a youth aged 19, was seen several months after the attack of pneumonia. He was in a weak condition, and was expectorating quantities of fœtid purulent material. On physical examination, bronchial breathing, and a great number of small and large râles were heard towards the front of the right lower lobe in the axilla. The note obtained on percussion just below the angle of the scapula is described as having a "distinctly metallic character." The patient was operated upon, and after pus had been found by aspiration, the cavity was opened and drained. In six weeks the patient gained thirty pounds in weight, and was discharged well.

The second case was in a man, aged 59, who, after an attack of pneumonia, had lost fifty pounds in weight in four months. When first seen there was almost constant cough and expectoration of large quantities of offensive pus. On physical examination there was dulness over the greater part of the left lower lobe, and a "cracked-pot sound" could be elicited outside the lower angle of the scapula. On auscultation, the voice and breath sounds are described as having been "metallic in character." This patient, like the other, was operated upon, and the abscess cavity drained. In six weeks he had gained forty-five pounds in weight, and, later, left the hospital with the wound completely healed.

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Abscess of lung from foreign body. Although, perhaps, the subject is more surgical than medical, it may be interesting to refer here to a case where *a foreign body which had set up an abscess in the lung* was removed by an operation which opened the abscess cavity. A boy, nine years old, when playing with a blade of grass in his mouth, drew it into the air-passages. As is usual in such cases the accident was followed by violent paroxysms of coughing, and in a few days the onset of fever suggested that the foreign body was setting up trouble within one of the lungs. At the end of about a fortnight dulness was discovered on the right side of the chest, behind and about the level of the tenth rib, and since the temperature continued to be raised, an exploratory puncture was made and pus drawn off. It was then decided to operate. An abscess in the lung was discovered; on introducing a finger into the abscess cavity

[1] *J. Am. M. Ass.*, 1902, xxxix. 739.

the foreign body was felt, and was removed with the aid of a pair of forceps. The boy made a good recovery.[1]

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Recurrent vomiting. A subject about which one, perhaps, does not hear very much is "recurrent vomiting." Dr. Keith Shaw [2] and Dr. Larned [3] both have papers upon this affection, and record cases. The disease is one of children, and perhaps is only an exaggerated type of a not uncommon affection. Some children are subject to recurrent febrile attacks. There may be little else to be noticed beyond the ordinary accompaniments of a rise of temperature; but with many cases there is cough, and some evidence of slight bronchitis; while with others the symptoms may be abdominal, and vomiting attacks lasting for about twenty-four hours are not so very uncommon. The attacks which go by the name of "recurrent vomiting," however, are very severe, and may last two or three days. The vomiting itself is described as "uncontrollable," and is attended with "symptoms of general prostration which may be alarming." The vomiting is said also to be "at first forcible, but towards the end of the attack, when exhaustion becomes marked, is accompanied by much effort." Constipation is usually present; and frequently no action of the bowels can be obtained until the vomiting has ceased. In spite of the severity of the vomiting, after it has ceased the recovery of the patient is generally rapid, in fact is described by one writer as being "almost instantaneous." One other small point to be noticed is that as in the more common mild cases referred to above, there is usually a slight rise of temperature. Severely ill though the children are during the attacks, happily a fatal ending is rare, and only twice has such an event been recorded. The disease generally begins before the fourth year of life. The frequency of recurrence varies considerably in different cases; but they usually become less frequent as the patient grows older, and cease altogether at puberty.

Apparently little can be done to check the vomiting; but morphia may be given hypodermically, or chloral be administered by the rectum. Dr. Shaw seems to consider that chloral given in this way in one of his cases had a beneficial effect. Large rectal injections of saline solution may also be given twice a day in order to allay thirst and keep up the secretion of urine.

The etiology of the disease has been discussed by several writers, and the majority appear to consider it either due to a toxin absorbed from the intestine, or to some form of auto-intoxication. No less than four observers seem to have noticed the odour of acetone in the breath, and three of them to have found it also in the urine. The acetone is probably of slight

[1] Bechmann, *Deutsche Ztschr. f. Chir.*, vol. lxiv., No. 1, p. 3; quoted in *La Semaine méd.*, Feb. 4, 1903, p. 38.

[2] *Arch. Pediat.*, 1902, xix. 824. [3] *Am. Med.*, 1902, iv. 258

significance in itself, but is said to be always accompanied by true pathological toxins.

Dr. Larned says that the diagnosis must be easy in most cases should the medical man be aware of the existence of the disease; but remarks that he expresses this opinion "feelingly," because two years passed before he had diagnosed his first case. To anyone who has not noticed a description of cases of "recurrent vomiting," the onset of meningitis or of acute intestinal obstruction would be considered probable, at least in the first attack.

It may be mentioned that in a case seen from time to time about six years ago at the Children's Hospital, it occurred to me whether the existence of pancreatic calculi was possible. In that case, however, there was, what appears to be uncommon in these cases, epigastric pain. This absence of marked abdominal pain is important; and Dr. Shaw thinks it a point to be remembered when the question of the possibility of the presence of intestinal obstruction arises.

THEODORE FISHER.

SURGERY.

The immediate and remote results of **partial and complete excision of the larynx for malignant disease** have of late years been considerably better than they were formerly. Not only has the mortality of these operations been diminished, but, in addition, the degree of freedom from recurrence of the disease following them, and of perfection in the functional after-results, have been increased.

Frank Hartley, of New York,[1] has recently contributed a valuable article to the literature of this subject, and verified the foregoing statements by reference to the published statistics, both old and new. In addition, he has described some of the means by which the improved results have been gained.

In this, as in most other departments of surgery, many statistical tables have been drawn up by various authors, which are open to the objection that they present the results in too favourable a light; for while human nature remains what it is, successful cases will continue to find their way into statistical tables, and unsuccessful ones, which should be there, will find a way of keeping out, and of being consigned to oblivion.

Hartley gives, in chronological order, a summary of all the important statistics hitherto published bearing on this subject; but we cannot say that it is easy from these to gain clear ideas as to what exactly have been the relative results of the four chief operative methods used for the removal of the disease in question in its varying grades. That, however, is the kind of information the surgeon needs, in order to decide which operation should be recommended in a given case, and with what

[1] *N. York M. J.*, 1902, lxxvi. 1020, 1059.

prospects. The four operative measures we allude to are: (1) The endo-laryngeal, in which the growth is removed through the mouth by laryngological means; (2) that by thyrotomy (laryngo-fissure), *i.e.* by dividing the thyroid cartilage in front, and removing the soft parts from within it; (3) that by partial excision of the larynx, including the framework as well as the soft parts; and (4) that by complete extirpation of the larynx.

On the basis of the statistics he quotes, Hartley writes: "The diminution in the death rate for laryngectomies from 1889 to 1900 was from 44 per cent. to 8.5 per cent. or 14 per cent. The increase in those remaining cured over three years has been from 7 to 15 or 16 per cent. during this period. The increase in those remaining free from recurrences, but not over three years, has been from 13 or 14 per cent. to 33 per cent. during the same period." In the class of cases dealt with by thyrotomy, or partial removal of the soft parts, he states that to-day the permanent cures are as high as 44 per cent., while the death-rate can be placed at 11 per cent., if two cases of accidental death in von Bergmann's clinic are excluded. We shall add below some conclusions of Butlin as to the results which are to be expected from this latter mode of operating. It will be seen, therefore, that our opening statement, that of late there had been an all-round improvement in the results of operations for malignant disease of the larynx, appears to be abundantly justified by statistics.

For a comparison of the relative results obtained by each of the four methods of operating described above, we append, arranged in a tabular form, the statistics given by Sendziak[1] in 1899, and quoted by Hartley.[2] They are based upon a collection of 640 cases.

Nature of Operation.	No. of Cases.	Mortality.	Definitely Healed.	Recurrences.	Unknown Results.
Endo-laryngeal	36	*Nil*	39 %	39 %	22 %
Thyrotomy	136	2 %	25 %	59 %	16 %
Partial Laryngectomy.	201	21.8 %	23 %	31.3 %	23.9 %
Complete Excision ...	267	35 %	13 %	30 %	22 %

We give this table because it is based upon such a large number of cases, practically all the cases that Sendziak could collect from literature. But the figures do not accurately show the present-day status of the operations under consideration, for they are materially influenced by the inclusion of the earlier cases, in which, as we have shown above, the results were so much worse than those now obtainable. In 1896 Sendziak[3] published a similar collection of cases, including only those up to the year 1894, and the statistics based on those cases have been

[1] *Jahresb. f. Chir.*, 1899, 480. [2] *Loc. cit.*, 1021.
[3] *Die bösartigen Geschwülste des Kehlkopfes*, Wiesbaden, 1897.

carefully considered by Butlin.[1] The later statistics present most of the difficulties of interpretation which Butlin encountered in dealing with the earlier statistics. For example, the early cases are not separated from the modern ones, nor the cases of intrinsic from those of extrinsic carcinoma. By English writers much importance is attached to this latter distinction; for they hold strongly the view that much better operative results follow in the cases of intrinsic carcinoma,—that is, in those which primarily affect the true or false vocal cords, the ventricles, or the parts below the cords,—than in the cases of extrinsic carcinoma; for in the former there is little tendency for the disease to implicate either the framework of the larynx or the lymphatic glands, except in the very advanced stages. For these cases, therefore, the less serious operations, such as thyrotomy or partial excision, are often the best. In the extrinsic cases, on the other hand, those in which the growth primarily affects the epiglottis, the ary-epiglottic folds, or the arytenoid region, the disease soon spreads to other regions,—to the pharynx, tongue, tonsil, or palate,—and soon attacks the lymphatic glands; and the removal of the growth, therefore, is usually a much more formidable undertaking than in the other class of cases, and the immediate and remote results are proportionately worse.

* * * * *

In further criticism of the methods of operation under discussion, we would first quote with approval Butlin's recommendation that though, sometimes, brilliant results have been obtained by removing the disease *per vias naturales*, yet this method is too uncertain, and should be employed only in very exceptional cases, and only in those in which the disease is very limited, and quite on the edge of the vocal cord, and in which old age and bad health preclude other operations. By this method the growth is not likely to be efficiently removed, and there is a possibility by irritation of increasing its activity. With regard to the operation of thyrotomy, Butlin[2] writes: "I feel quite certain that one hundred thyrotomies ought to be performed at the present time for intrinsic carcinoma with a mortality of three or four, perhaps even less than this." Discussing the results of the operation, the same writer states that up to the end of 1896, Sir Felix Semon and he had performed the operation on sixteen patients, and that ten of them were alive and free from the disease for at least three years after the operation, and that the results of their later operations promised to be quite as good.

The best immediate results hitherto recorded from complete excision of the larynx are those of Glück,[3] who, in 1900,

[1] *The Operative Surgery of Malignant Disease*, 2nd Ed., 1900, p. 195.
[2] *Op. cit.*
[3] *Verandhl. d. deutsch. Gesellsch. f. Chir.*, 1900. Quoted by Hartley.

reported 34 cases with 31 recoveries—a mortality of only 8.5 per cent.

The causes which have led to the improved results now obtainable from these operations on the larynx are to be attributed to the improved technique, by which the former frequent causes of death—in particular, aspiration-pneumonia, and infection of the cellular tissne around the trachea and continuous with that in the mediastina—are more effectually guarded against. The chief measures now adopted which are beneficial in the above way are the following, all of which are alluded to by Hartley:—

(1.) The avoidance of general anæsthesia and the more frequent employment of local anæsthesia. Kocher has used cocaine more extensively than anyone, with the object of preventing cough, stilling hemorrhage, and diminishing pain. Further, by using cocaine the reflex irritability of the trachea and bronchi seen in general anæsthesia is avoided. The cocaine also leads to a better definition of the limits of the growth (Butlin), and it diminishes the tendency to sudden reflex inhibition of the heart and respiration through the superior laryngeal branch of the pneumogastric nerve (Crile). For the latter purpose also, the subcutaneous injection of $\frac{1}{100}$ gr. of atropine has been recommended.

(2). The use of the Trendelenburg and Rose posture for the patient during the operation, in which the natural tendency of all secretion and blood is to flow away from the trachea. By this posture the danger of the aspiration of these secretions is diminished. Also, in the more restricted operations, with the patient in this position, tracheotomy may be dispensed with, and in all cases the various tampon cannulæ may be avoided, the use of which is said rather to increase than prevent the danger of aspiration pneumonia.

(3.) The complete division of the trachea at the level of the upper rings in total laryngectomy, and its deflection forwards and suture to the skin in the lower part of the wound. To accomplish this it may be necessary to divide the thyroid isthmus in front, and to separate the œsophagus from the trachea behind. This plan, adopted and recommended by Glück in 1881, appears to be a very valuable one, tending to diminish the danger of infection of the lungs from the discharge of the mouth and pharynx, and to prevent infection of the cellular tissues of the neck from the tracheal discharges. Another advantage is, that the subsequent use of a tracheal cannula is sometimes avoided, for the lumen of the trachea does not undergo stenosis.

(4.) The danger of infection of the peri-tracheal connective tissue in total extirpation of the larynx can be much diminished by shutting off the cavities of the mouth and

pharynx from the wound, and from the lumen of the trachea. This may be effected in various ways. Bardenheuer, in 1891, recommended the preservation, as far as possible, of the mucous membrane of the anterior wall of the œsophagus, and that of the ary-epiglottic folds, and the suturing of these surfaces together. If necessary, he made use of the inverted epiglottis, suturing its freshly-pared edges to the walls of the pharynx and the anterior wall of the œsophagus. The wound was packed with gauze and allowed to granulate. Ritter, in addition to the above, sutured the divided muscles over the mucous membrane and the skin, as far as possible over all. Sacchi endeavoured to close the lumen of the upper end of the trachea, by suturing together the mucous membrane of the anterior wall of the œsophagus, the sides of the pharynx and the skin-flaps, over the end of the trachea. Glück, in his later cases, after resection of the trachea, closed the wound by superimposed skin-flaps taken from the sides of the wound, in a manner like that used for urethral fistula. Fœderle, in one case, after extirpation of the larynx, was able to loosen the trachea and unite its cut end to the hyoid bone, and join the mucous membrane of the trachea to the epiglottis and ary-epiglottic folds. This excellent procedure has not apparently been successfully repeated. Hartley tried to accomplish it in one of his cases, but failed. In another reported case it was accomplished; but in a few days all the sutures gave way from tension.

(5.) The performance of thyrotomy as an early step in all cases in which laryngectomy is contemplated is strongly advised. By this means the growth can be thoroughly examined, and the best means of dealing with it decided upon; and in that way unnecessarily severe operations avoided.

(6.) The immediate result of all these operations is much influenced by judicious after-treatment. Hartley adopts the plan of raising the foot of the bed during the first three days, and keeps the patient without a pillow. Rectal feeding is used until the third day, and then the patient allowed to try and swallow when lying in an exaggerated Trendelenburg position, trying to swallow, as it were, "uphill." If the wound is not closed, some leakage may occur; and if this cannot be prevented by external pressure, a catheter must be used; but it is better to avoid that instrument, if possible. In this position of the patient, any escaping fluid tends to flow away from the trachea. Marmaduke Sheild,[1] in cases of thyrotomy, recommends the patient to be kept in the sitting posture in a "steam tent," and to have creosote inhalations, and a spray of Listerine and water occasionally, and not to use the voice at all for a full month. The first attempts to swallow, are made

[1] *Brit. M. J.*, 1902, I. 941.

with the patient on the side, with the tube of the feeder in the dependent cheek.

In spite of bestowing the most careful attention upon all the details described above, both during the operation and subsequently, partial and complete laryngectomy remain operations of great severity, and entail a heavy mortality. The cases which call for these procedures will usually be associated with glandular involvement. It appears to be generally held, that good results cannot be obtained, and that the serious operations should therefore be given up in those cases in which the deep cervical and peritracheal glands are implicated. Only in the cases in which the glands affected are those in the pre- and lateral-laryngeal regions can the disease be satisfactorily removed.

Lastly, to illustrate the degree of functional recovery which may possibly be attained after complete excision, we may briefly refer to three very successful cases. In 1895, at the British Medical Association Annual Meeting in London, Solis Cohen showed a patient, brought over from Philadelphia, in whom, after extirpation of the larynx, the tracheal stump had been fixed to the lower part of the skin incision. The patient could swallow with ease and comfort, and could speak through the open mouth of his trachea so distinctly that he could be heard and understood at the end of a long room. In a case of Schmidt's also, the patient acquired a voice, which was thought to be made between the base of the tongue and the wall of the pharynx. Lastly, Goldstein[1] has had a case in which, by training, the voice became so developed that the patient could be heard at a distance of three or four feet. The trachea in these cases was not in communication with the oro-pharynx. The voice was believed to be produced between the pharyngeal wall and the remains of the epiglottis. In the latter cases, the air necessary to pass through the narrow slit representing the new larynx, was believed to be first collected in a dilatation of the pharynx below the tongue or epiglottis and above the œsophagus. A second, or reserve dilatation, was thought to be in the upper fourth of the œsophagus (Hartley). Such cases as these seem to show that in the future the artificial larynx may cease to be used, a desirable thing, for such instruments act as irritants, and in some cases have been thought to encourage recurrence of the growth; and, further, they are difficult to keep clean and in order.

J. Lacy Firth.

[1] *Verhandl. d. deutsch. Gesellsch. f. Chir.*, 1900.

Reviews of Books.

Diseases of the Organs of Respiration. By SAMUEL WEST, M.D. Vols. I. and II.: Pp. xii., 398; viii., 399-913. London: Charles Griffin & Company, Limited. 1902.

It is no light task that the author has undertaken, to place before the medical profession a new treatise on the organs of respiration, which does more than merely cover ground already so well occupied. But the progress that marks our knowledge of diseases of this region renders even recent treatises capable of improvement; and Dr. Samuel West has done so much to advance that knowledge that this new work is certain to be regarded as a valuable guide in practice. We congratulate the author not only on the matter, but also on the manner in which he has set it before the reader, for it is not given to every scientist to be so good a teacher of his subject.

We are pleased to note that Dr. West does not consider that all forms of membranous laryngitis are diphtherial, and he clearly states his conviction that a number of cases must be regarded as the result of other infective micro-organisms. In the laryngeal section there are some defects. Thus in discussing the pathology of congenital laryngeal stridor, the author, though relying on Sutherland and Lack's observations for the clinical appearances of the larynx in this affection, passes over their views as to the way in which the condition arises, and speaks of Thomson and Turner's experiments on the cadaver as conclusively demonstrating the causation. Again, the cadaveric position of the vocal cords is inaccurately stated to represent "the position of equilibrium or rest." The author, in discussing the pathology of abductor paralysis, and the early failure of the abductors, as compared with the adductors, makes absolutely no reference to "Semon's law," or to the researches of Semon and Horsley bearing on the question. Among the symptoms of malignant disease of the larynx, hoarseness is mentioned incidentally, but pain is stated to be a common symptom, "and being, in the absence of perichondritis, rare in other laryngeal affections (!), it becomes of some diagnostic importance." The section on laryngeal diseases is in several respects meagre, and taken as a whole cannot be regarded as worthy of a "special treatise" on this region, though a great advance on most text-books of medicine.

We wonder that Jenner's name finds no mention in connection with the expiratory theory in the production of emphysema, though so many others are mentioned as the expounders of various views.

The author does not uphold strongly the advantages of the sanatorium treatment of consumption; his praises of it are

certainly faint. But we find little evidence of personal experience of sanatorium methods. We note with regret that no mention of the fact that open-air treatment was first introduced by an English physician named Bodington, although it is undoubtedly due to Germany that the method has been placed on a practical basis. We do not agree that "of Continental institutions the most highly developed at the present time is at Nordrach," or that "sanatorium treatment . . . will not cure the disease," or that "the sanatorium cure . . . is but a cheaper substitute for residence abroad."

As a treatise on diseases of the lungs and pleura, this work must take a very high place, and is worthy of the well-founded reputation of the author.

Diseases of the Pancreas, and their Surgical Treatment. By A. W. Mayo Robson, F.R.C.S., and B. G. A. Moynihan, M.S. (Lond.), F.R.C.S. Pp. 293. Philadelphia and London: W. B. Saunders & Company. 1902.

The surgery of the pancreas is one of the latest achievements of abdominal work, and the authors have taken a prominent part in bringing it to its present position. The book is, therefore, a timely record of what has been done in this direction, and though it may be needful to alter our present views on many points which require further elucidation, we are grateful for this volume which puts the known facts before us in a clear and masterly manner.

There have been many workers in this field, and the labours of Oser, Körte, and Opie have received recognition; but we failed to notice any reference to Riedel, who was among the first to point out the relationship between cholelithiasis and interstitial pancreatitis.

The greater part of the book is taken up by a description of the pathology, symptoms and treatment of the various forms of pancreatitis; and it is pleasant reading to find that there is hope even in such desperate cases as acute inflammation of the pancreas.

Pancreatic cysts are dealt with fully, taking up about one-fourth of the whole work; and the various interesting questions which these tumours afford are ably discussed.

Illustrative cases are given freely, and this is a part of the work which we think could be profitably curtailed in a future edition, as there is nothing gained by a repetition of cases almost similar in nature.

It does not appear to us desirable to place on the title page every small appointment held by the author of a book. In the present instance, we find a hospital mentioned which, according to the *Medical Directory*, contains only sixteen beds, and another hospital is given which we have failed to find mentioned at all in the *Directory* list of provincial hospitals.

To all who are interested in this branch of surgery we can strongly recommend this volume, which is likely to be the standard English text-book on the subject for some time to come.

Selected Papers on Operative and Clinical Surgery. By Sir WILLIAM STOKES, M.D., M.Ch. Edited by WILLIAM TAYLOR, B.A., M.B. Pp. xxv., 484. London: Baillière, Tindall & Cox. 1902.

The greater part of this book consists of a number of papers, either published in journals or read before Societies by the late Sir William Stokes. The papers are well written, and amongst them are a number of very interesting clinical cases. As, however, many of them date back to the seventies, and some even to the sixties, it will be found that their interest lies in their expression of the surgical principles of a generation past, rather than in that of the surgery of to-day.

In the chapter on aneurysm no mention is made of excision of the sac, or ligation close above the sac in the spontaneous form of the disease, compression being the method of treatment mainly advocated. It seems strange that Sir William Stokes should have only seen one traumatic aneurism of the radial artery. We should have thought this one of the arteries most frequently affected.

Davy's lever is strongly recommended for arresting hemorrhage in amputation of the hip-joint, although from the account of the cases it does not seem to have been entirely satisfactory. The amputation by the anterior racket incision is somewhat summarily disposed of.

It seems strange that the case of rupture of the female bladder, recorded in chapter ix., was not operated on. The symptoms appeared sufficiently obvious, yet the patient was watched for five days getting steadily worse until her death, and nothing done.

In the chapter on operations of the thyroid gland, the question of the advisability of removal of the whole organ is discussed,—a question now long ago settled. In removal of the tongue, the ecraseur is advocated. We cannot help agreeing with Treves, that this method has "about it a distinct air of senility." Pins are advised in the operation for hare-lip. We imagine few surgeons use them now. Some of the plates in the book on this and other sections, if accurately reproduced, show most wonderfully good cosmetic results. Median lithotomy, as the operation of election, is hardly in accordance with present-day teaching.

It will be seen from these few remarks that the interest of much of the writing is historical. Towards the end of the book are a number of addresses on surgery, given by the author at

various times. The last chapter records some of his South African experiences, and at the beginning is a short but interesting introductory memoir by Ogston.

Clinical Essays and Lectures. By HOWARD MARSH, F.R.C.S. Pp. xii., 303. London: J. & A. Churchill. 1902.

In this book the author has embodied various essays and lectures which from time to time have been published in the *St. Bartholomew's Hospital Reports* or elsewhere. They form a most agreeable collection of clinical and pathological material, which well repays a careful perusal. They are illustrated by numerous cases met with in the author's extensive experience, and give evidence of sound scientific knowledge, together with practical good sense.

Manual of AnteNatal Pathology and Hygiene—The Fœtus. By J. W. BALLANTYNE, M.D. Pp. xvi., 527. Edinburgh: William Green & Sons. 1902.

The field of ante-natal pathology is probably almost a *terra incognita* to most medical men. A book such as this, however, shows how large is the literature upon this subject, and how much still remains to be known. The subject of the infection of the fœtus through the mother is an interesting one; and some of us may be unaware that small-pox, measles, and typhoid fever have all been transmitted from the mother to the unborn infant. There are some interesting points also in connection with vaccination: thus, of fourty-four women who were vaccinated without success during their pregnancies, presumably on account of earlier successful vaccination, thirty-one gave birth to infants that were refractory to vaccination.

One question that affects Bristol is the influence of tobacco upon the fœtus. Some writers appear to think that not only are women-workers in tobacco factories more likely to abort than other women, but "that there is a very large infantile mortality in post-natal life among the offspring of women-workers in tobacco." Manufactures in which salts of lead are employed also affect the life of the fœtus. The well-known deleterious effects of over-indulgence in alcohol in the parents are also discussed.

Besides such familiar conditions as the various aspects of congenital syphilis, one will find the chief facts that are known about such diseases as fœtal dropsy, elephantiasis, fœtal bone disease, fœtal ascites, abnormal conditions of the bladder, ureters, and kidneys. The causation of hydramnios is also discussed, as well as the pathology of fœtal death. Much though the book contains, one is surprised to find that even here all abnormal congenital disease conditions do not appear to

be referred to; yet there is little doubt that should anyone wish to find information about some abnormality of the fœtus with which he has become acquainted, he is not likely to consult this book in vain.

Text-book of Pharmacology and Therapeutics. Edited by W. HALE WHITE, M.D. Pp. viii., 1040. Edinburgh and London: Young J. Pentland. 1901.

If it is with a feeling not far removed from aversion that one regards treatises on therapeutics generally, the volume under consideration inspires a sentiment of quite opposite character. Dr. Hale White has taken to himself as co-operators many of the most distinguished authorities in the various departments of pharmacology and therapeutics, both in Great Britain and the United States, and their conjoint labours have produced a work which is a distinct gain to medical literature in the English language. In a work in many sections, written by different authorities, it must happen that some topics seem to be treated more adequately and more satisfactorily than some others, and a due sense of proportion cannot always be obtained by the most strenuous and imperative of editors. Of some of the sections which seem to be handled in a specially satisfactory manner, we would mention the chapter on heart tonics, by Dr. Rose Bradford; that on anæsthetics, by Mr. George Rowell; that on electricity, by Dr. J. H. Bryant; and that on serum therapy, by the late Dr. J. W. Washbourn, written previous to his departure for South Africa. Dr. Washbourn thought that "there is no doubt that the incidence of paralysis in diphtheria has increased since the introduction of antitoxine." This may be, he thought, because "the nervous tissues . . . possess as great, or greater, an affinity than the antitoxine for the toxine, and are consequently not protected by the antitoxine." If this be true, it is possible that some substance may yet be found which will protect against paralysis. Dr. Shoemaker, of Philadelphia, writes about some drugs in the *United States Pharmacopœia* which are not of material therapeutic importance, and the learned editor contributes an useful section upon drugs which are recognised in the Indian and Colonial addendum to the *British Pharmacopœia* of 1898. We need not say that this is well done; but if our *Pharmacopœia* is designed to be co-extensive in use and validity with the British Empire, Calcutta and Cape Town, Melbourne and Montreal should each independently be allowed to supply information and criticism upon the remedies peculiar to their own several countries.

The work is remarkably free from errors; the statement that Nordrach-on-Mendip is on the Quantocks—a venial slip—is one of the very few mis-statements we have noticed. It has been most carefully freed from typographical errors, and is provided with an excellent index. Altogether, the book is a credit to editor, authors, and publishers alike.

Practitioner's Handbook of Diseases of the Ear and Naso-pharynx. By H. Macnaughton Jones, M.D., M.Ch.; W. R. H. Stewart, F.R.C.S. Ed.; William Milligan, M.D., C.M.; Herbert Tilley, M.D., B.S.; Ambrose Birmingham, M.D.; and Robert Dwyer Joyce, F.R.C.S.I. Sixth edition. Pp. vii., 366. London: Baillière, Tindall & Cox. 1902.

The names of the writers who have contributed to the pages of this book are alone a sufficient guarantee of its excellence. We have read no modern English book on otology better adapted for the use of practitioners and students; and it is for readers of this class, and not for specialists, that the work has been written.

The chapter on the complications of suppurative middle-ear disease, written by William Milligan, is particularly good, containing in small compass a very clear account of the symptoms, diagnosis and treatment, especially operative treatment, of these affections. We note that the author highly values the Wilde incision in the treatment of mastoid periostitis when the periostitis is primary or secondary to uncomplicated acute suppurative inflammation of the tympanic mucosa. The author states that in many such cases the inflammation within the middle ear will quickly subside after the incision has been made. Many otologists have failed to obtain these good results from a mere incision into the periosteum, and think that it is better to carry the operative procedures further, and to open the mastoid antrum.

The chapter devoted especially to diseases of the nose and naso-pharynx has been written by Herbert Tilley, and is concise and practical. We think, however, that some of the conditions discussed have rather a remote bearing on disease of the ear, and that the treatment of these by operation or otherwise will yield little or no beneficial result so far as the ears are concerned.

The volume is well got up, and is especially rich in illustrations of otological instruments.

Suggested Standards of Purity for Foods and Drugs. By C. G. Moor. Pp. 260. London: Baillière, Tindall & Cox. 1902.

This work deals chiefly with the drugs and galenical preparations of the *British Pharmacopœia*, and to a slight extent only with articles of food.

The present time is opportune for the publication of these suggested standards of purity for drugs, when the question is receiving considerable attention from medical men and pharmacists throughout the country.

The author summarises the analytical data of numerous

workers upon official drugs and galenical preparations. In the case of drugs owing their therapeutic activity to definite substances which can be determined by chemical methods, standardisation is readily attainable, and, in many important instances, was adopted in the *British Pharmacopœia* of 1898.

Extension of the principle to other important official drugs is advocated, and standards of active principles suggested.

In the many instances where no definite active constituents can be isolated, the author, following the course adopted by the *British Pharmacopœia*, suggests percentage of extractive matter yielded to certain solvents, percentage of ashes, and limits of water, as indicating standard quality.

Galenical preparations of the nature of tinctures, liquid extracts, etc., are to be examined with regard to specific gravity, percentage of total solids, and percentage of alcohol. In addition, determination of active principles is to be made wherever practicable.

The author quotes extensive data, showing what limits may reasonably be expected in genuine preparations.

The standards to be aimed at in the case of crude drugs are: attainment of a definite quality, and freedom from admixture and sophistication. In the case of preparations of drugs, an approximately constant therapeutic value is demanded, as indicated by active principles, or where these cannot be determined, by agreement with standard constants.

We notice that in dealing with ipecacuanha, the author states that there is no means of ascertaining whether the official or non-official root has been used in preparing the liquid extract or wine. He overlooks the fact that the relative proportions of the two chief alkaloids differ considerably in the Rio and Carthagena roots, and that as the ratio of emetine to cephæline in each root is approximately constant, the source of the preparation may be determined by a rough separation of the total mixed alkaloids obtained.

The question of physiological standardisation is left untouched.

A Manual of Medicine. Edited by W. H. ALLCHIN, M.D. Lond. Vol. IV. "Diseases of the Respiratory and of the Circulatory Systems." Pp. xi., 493. London: Macmillan and Co., Limited. 1902.

Dr. Mitchell Bruce writes on Diseases of the Heart and Blood-vessels; Dr. F. de Havilland Hall, on Diseases of the Pleura; Dr. Leonard Hill, on the Physiology of Respiration and the Physiology of the Circulation; Dr. Hector Mackenzie, on Diseases of the Lower Respiratory Tract; Dr. Lewis Smith, on Diseases of the Upper Respiratory Tract; and the Editor, on Disorders of the Diaphragm and Dropsy. The treatment of

pneumonia is dismissed in two pages, and no mention is made of such important drugs as digitalis, phenacetine, chloral, and ether: the ice-bag is mentioned in a cursory way, but no details as to its use are given; this is the case also as regards pericarditis, in which condition we believe the ice-bag to be of the greatest value. The general excellence of the work has been commented on in our previous Review, vol. xix., p. 151, and this volume is full of interest and instruction for those who study it attentively. It is intended for the youthful student, as the type is small for those above middle-age.

The International Text-book of Surgery, by British and American Authors. Edited by A. PEARCE GOULD and J. COLLINS WARREN. Vol. I. Pp. 947. London: W. B. Saunders & Co. 1900.

This book is one of the signs of the times—an Anglo-American combine of surgical literature—and the editors and contributors are to be congratulated on the thoroughness and completeness of their work.

This volume deals with general surgery, and the majority of the writers are well-known American surgeons. The orthography is transatlantic, as exemplified by such words as neighboring, oxid, chlorid, findings, theaters, tumors, and the composition is superior to that generally met with in American writings. The illustrations number over 450, and are of unequal merit, but include many excellent photographic reproductions. Special attention may be directed to a short but good chapter on the Surgical Pathology of the Blood; but we question the wisdom of the inclusion of a chapter on anæsthetics. The text is full of valuable detail, comprehensive and exact; and the work can be strongly recommended to surgical readers, and not less so from the fact that it expresses the views and practice of our kinsmen, which differ, in some respects, from our own.

The Evolution of Artificial Mineral Waters. By WILLIAM KIRKBY, F.L.S. Pp. x., 155. Manchester: Jewsbury & Brown. 1902.—This monograph describes the initiation and development of the mineral-water industry. There are no technical descriptions of machines and processes, and no formulæ for preparations, so that it is not intended as a manufacturer's handbook, but it is intended to convey to the ordinary reader an intelligent and interesting account as to how artificial mineral waters came into being, and how they are manufactured to-day. Appended is a series of photographic views of the manufactory of Messrs. Jewsbury and Brown at Ardwick Green, Manchester.

Menstruation and its Disorders. By ARTHUR E. GILES, M.D. Pp. 100. London: Baillière, Tindall & Cox. 1901.—In this handbook the author gives a very full account of the physiology and pathology of menstruation. In dealing with the physiological phenomena, he quotes largely from the investigations of Walter Heape on the menstrual phenomena in the female of semnopithecus entellus. He points out that menstruation in the human female corresponds to the pro-œstium in the other mammalia, except in apes, in whom the function corresponds with that in the human female. He gives a very concise account of the different conditions associated with amenorrhœa, under which heading he does not include cases of retained menses, which he calls crypto-amenorrhœa, which strikes us as a logical arrangement. He, in our opinion, rightly discards the idea of vicarious menstruation, describing the hemorrhage usually called by this name as "supplementary hemorrhages." We notice one or two rather important omissions: one the failure to mention the condition often termed "adenoma benignum" as a cause of both menorrhagia and metrorrhagia; in the other the failure to emphasise the frequency of ovarian adhesions and cystic degeneration without great enlargement as causes of dysmenorrhœa. This latter point deserves fuller notice. He objects to the use of the term "obstructive" as usually applied to dysmenorrhœa, and in this we consider he is logical: "spasmodic" is both more correct, and does not indicate pathological ideas. He also gives some interesting statistics showing the relation between the age of menstruation and sterility. Though on the whole the statements made are sound, we should have preferred that the author had left less to the imagination of the reader, and avoided an indefiniteness at times rather annoying.

Points of Practical Interest in Gynæcology. By H. MACNAUGHTON-JONES, M.D. Second Edition. Pp. ix, 157. London: Baillière, Tindall & Cox. 1901.—In a review of the previous edition of this little work we commented on the practical hints given by the author, and do not find it necessary to again refer to the many good points he impresses on the reader. The work is especially valuable in that it is almost a collection of clinical lectures, and is what it is stated to be—a collection of practical points in maxims of, and hints on, gynæcology. The author has added a chapter on retroversion of the uterus, and shows how he has become gradually converted to the treatment of this affection by operation. He acknowledges that in many cases he has been able to cure patients by minor measures, *i.e.* by local absorbent, massage, posture, curettage, and pessaries, even though at first sight the condition seemed incurable, and then proceeds: "But recalling the numbers in whom there was no such satisfactory issue, the time, the suffering and inconvenience involved in the process, I should not now submit them to the same treatment,

but advise operation." He considers that in cases where the uterus is mobile and adnexal disease absent, Alexander's or the Alexander-Adam's operation is the most suitable. If adnexal disease be present cœliotomy is the best course, in his opinion. His last paragraph will meet with universal acceptance: "Displacements that do not yield to such palliative treatment that pessaries fail to cure, that are complicated by disease of the adnexa, that cause symptoms seriously interfering with the health of the woman, and which prevent her following her avocation, demand operative interference."

Advice to Women on the Care of the Health before, during, and after Confinement. By FLORENCE STACPOOLE. Third Edition. Pp. viii., 184. London: Cassell and Company Limited. 1901.—This little work we can recommend: it is full of common-sense maxims and useful hints as to the conduct of women during pregnancy in order that they may maintain their health. The hints as to the preparation necessary for parturition are most sound and valuable. We feel, however, that we cannot commend the insertion of prescriptions to be used by the public. This, in our experience, is a fertile source of work for the doctor, and therefore not conducive to the true interests of the patient. If the author can disabuse the minds of the female public of some of the numerous harmful superstitions prevalent with regard to pregnancy and labour, she will be doing an immense service.

Transactions of the Obstetrical Society of London. Vol. XLII. London: Longmans, Green, & Co. 1901.—This volume, as usual, contains an abundance of interesting communications from which the following may be selected as being especially worthy of notice, either on account of their originality or practical value. Dr. Spencer contributes an account of "Four cases of Rupture of the Uterus successfully treated by packing the tear *per vaginam* with iodoform gauze." With the experience now common to many that the opening of the peritoneal cavity *per vaginam*, even in circumstances unfavourable to strict asepsis, *e.g.*, in cases of sloughing carcinoma, is usually unattended by serious results, the success of Dr. Spencer's plan would not be surprising if viewed on merely general grounds, and in cases in which the tear had not opened the peritoneal cavity, might be generally expected. When, however, we find that in two cases the peritoneal cavity was not only opened freely, but contained much blood, and in one "a piece of slightly offensive membrane" was hanging in the vagina, the successful use of this method of treatment is sufficiently startling. It is of course only another illustration of the self-protective power of the peritoneum when free drainage is used. Dr. Spencer's results in these four cases contrast most favourably with the results obtained by him in other cases treated by operation—in every case unsuccessfully. Several other papers and specimens referring to this subject

will be found in the volume. The "Causation of Sex" has for long troubled the minds of speculative enquirers. Dr. Rumley Dawson is of opinion that ova from the right ovary produce males, and those from the left ovary females, and mentions a number of curious coincidences in the way of occluded tubes, corpora lutea, and the sex of the children connected with these phenomena. He dismisses the cases mentioned by those of his audience who discussed the paper, in which the removal of one ovary had been followed by the production of children of both sexes, as due to the incomplete removal of the ovary. Although this argument may apply in cases of oöphorectomy with adhesions present, we fail to see how it can in a case which is within our knowledge, in which ovariotomy for a large cystic tumour before marriage has not prevented the birth of a family of two girls and two boys. Other interesting papers may be mentioned: "A case of Double Tuberculous Pyosalpinx with intercommunication of the tubes," by Dr. Galabin; also a similar condition described by Mr. Malcolm; a case of "Repeated Ectopic Gestation," by Dr. Lewers. Space will not allow of detailed reference to the many other interesting papers.

Pediatrics. THOMAS MORGAN ROTCH, M.D. Third Edition. Pp. 1021. Philadelphia and London: J. B. Lippincott Company. 1901.—This is a well-printed and well-illustrated book, but one cannot help feeling some sense of disappointment after its perusal. It contains few facts about disease in children that cannot be gathered from a good text-book of general medicine, and one would have thought the great experience of Dr. Rotch would have enabled him to make more practical suggestions as to treatment. The feeding of infants, as one would expect, is dealt with very fully. As is well known, Dr. Rotch and some of his confrères have aimed at gauging the nutritive needs of any particular infant with mathematical accuracy, and of prescribing amounts of fat, proteid, and sugar accordingly. The attempt is praiseworthy, and, although to most of us the remark of Jacobi may forcibly appeal, that "the best thing to mix with milk is a little common-sense," we cannot but think that, medically at least, common-sense must be based upon scientific accuracy. Not uncommonly, however, as perhaps in this case, scientific zeal may override sound judgment, yet even should that be so, we may repeat that the attempt to feed infants on a definite system suited to every individual case is praiseworthy.

Forensic Medicine and Toxicology. By J. DIXON MANN, M.D. Third Edition. Pp. xii., 692. Charles Griffin & Company, Limited. 1902.—Very little need be said in praise of this standard work, which has now reached a third issue. Besides a general revision, notices of some additional poisons have been added, and the book now stands in the very highest rank of contemporary treatises on the subject. Bulky as the volume

is, the text has been compressed more than is desirable, and we only wish that more cases had been given illustrating obscure points. The account of the late epidemic of arsenical poisoning is much too brief, though it is possible that the full meaning of the outbreak is yet undecided. Chronic alcoholic poisoning should have a separate section, if only for the sake of diagnosis. The author does not refer to the treatment of carbolic acid poisoning by washing out with alcohol, though apparently successful cases have been reported. Of late, too, a great deal of work has been done on the investigation of lead poisoning, especially that which is caused in the manufacture of earthenware. The danger to the operatives, unless various precautions are taken, is well known, and the mortality has already been greatly reduced. Whether it will be possible to use leadless glaze universally is less certain, and it becomes an important question whether the common use of crockery covered with a leaden glaze may not be the cause in susceptible persons of much of the existing kidney and nerve disease, or even of some of those affections which have been ascribed to "uric acid." There would be great difficulties in the detection of the poison in such chronic cases, though in the early stages of plumbism certain changes in the red cells have been recently demonstrated. The Widal test should be made in examining supposed cases of starvation to exclude the possibility of the symptoms being due to recent ambulatory typhoid; and in the examination of blood-stains, the new method of distinguishing human from animal blood based on the Widal reaction should be noticed in the next edition. On the whole, the student and practitioner will probably find no better book than this as a guide to a difficult subject.

Medical Guide to the Hot Mineral Baths of Bath. Pp. 111. Bath: The *Herald* Office. 1902.—This guide, with extracts from the Report of the Special Commission of the *Lancet*, has been published by the Baths Committee of the Bath Corporation, with the approval of the Local Council of the British Medical Association. It has therefore received an official recognition as an authoritative account of what can be done by the Bath waters, and the personal element has been entirely eliminated. The aim of the work is to show "that far from living upon its historic past, Bath stands to-day unsurpassed by any other health resort, at home or abroad, whether in regard to the medicinal virtues of its mineral springs, or the luxury and scientific completeness of the several establishments wherein the healing waters are administered." An appendix, containing a list of hotels, boarding and lodging houses is likely to be useful.

Heath's Practical Anatomy. Ninth Edition. Edited by J. ERNEST LANE. Pp. xviii., 696. London: J. & A. Churchill. 1902.—This well-known manual has now reached its ninth

edition. The aim of the Editor has been to bring the book up to date, and to add new drawings and diagrams without increasing the dimensions of the volume, but at the same time in no way to impair its utility. This he has succeeded in doing. The references to surgery, which are unnecessary in a work of this sort, and some of the old illustrations, have been omitted. We note several new illustrations which will be of much value to students; we might mention in particular four very clear diagrams, showing the arrangement and principal anastomoses of the arteries of the neck and extremities, which are a considerable acquisition to the work. Another very useful addition is a tabular enumeration of the arteries and nerves, which is appended to the dissection of each region of the body —thus showing at a glance the distribution of all the branches, and their connection with the main trunks. We do not understand the sub-division of the portion of the prostate anterior to the urethra, as figured in a sagittal section of that gland (fig. 167). A transverse fissure is there represented as dividing this portion into two equal parts. The series of coloured plates, which were hitherto placed together at the beginning of the book, have now been interpolated through the volume in the description of the regions to which they refer. The general plan of the work and the excellent illustrations are too well known to need description here. As a dissecting-room manual it is portable and convenient, containing in one volume all the information that is necessary. The author does not profess to provide an elaborate treatise, but a concise and accurate account of all that the student will require to know for ordinary examinations, and as such it will commend itself to many students.

The Principles and Practice of Medicine. By WILLIAM OSLER, M.D., F.R.S. Fourth Edition. Pp. xvii., 1182. Edinburgh: Young J. Pentland. 1901.—Such a well-known and widely-read text-book needs no further recommendation, but we may point out that the last edition is not in any sense a mere reprint of its predecessor. Thus the article on typhoid fever has been in great part re-written, the subject of malaria recast, and many new articles have been added to bring this excellent text-book thoroughly up to date. Further comment is unnecessary, for the name of the author guarantees that the new matter is as reliable and well written as the old.

The Diagnosis and Modern Treatment of Pulmonary Consumption, with especial reference to the Early Recognition and the Permanent Arrest of the Disease. By ARTHUR LATHAM, M.D. Oxon. Pp. 215. London: Baillière, Tindall and Cox. 1903.—The author of the prize essay on the erection of his Majesty's sanatorium may well claim to be an authority on the modern views with regard to tubercular disease. This volume is a series of articles previously published, but now collected in a form which should prove of service as a practical guide to the

diagnosis and treatment of pulmonary consumption. Those who wish to study the principles of open-air treatment as carried on either in a sanatorium or in a private house will derive every assistance from a study of this standard account of the subject. The author does not, however, ignore other aids to treatment, medicinal and dietetic.

The Treatment of Injuries by Friction and Movement. By WHARTON P. HOOD, M.D. Pp. vi., 182. London: Macmillan & Co., Limited. 1902.—Dr. Wharton Hood has made such a reputation for himself in the treatment of certain injuries of the limbs and joints by so-called "bone-setting" that no explanation is needed from him as to his reasons for writing this book. He tells us, however, that he was indebted to the noted Mr. Hutton, for disclosing to him the "secrets of his art." These secrets had been handed down for a very long period. Mr. Hutton came of a family which had practised a rude surgery among the dalesmen of the North of England for many years, and had acquired considerable skill in curing a certain class of injuries without requiring the patient to rest. He always told the patient "a bone was out," and then adopting various devices of grasping and of position, by which the muscles were hindered from assuming an attitude of resistance, he suddenly bent, extended, or rotated the limb, keeping at the same time firm thumb pressure upon the tender spot; usually something would be heard to snap or crack, and freedom of movement and freedom from acute pain would at once result. Dr. Wharton Hood not only carries out the method of Hutton in treating chronic injuries, but in this book he strongly urges the treatment of recent fractures without splints, by means of strapping plaster and constant movements. We will not describe his methods here, but we recommend all surgeons to read the book. There is much in it with which we agree, and much with which we disagree. Thus, when he insists that local swelling and blood-stasis, the results of a recent fracture, may be entirely removed by gentle movements of stroking or squeezing, directed from the distal towards the proximal portion of the limb, together with regular movements of the joints carried out by the patient's own efforts, without any fixation, we quite agree with him; but when he tells us that in treating fractures of the shaft of the femur the patient should be allowed to flex the knee on the fifth or sixth day, and that in fractures of the patella the patient should only be confined to bed for a day or two, and that no attempt should be made to bring the fragments into apposition, we do not agree with him.

The Study of the Pulse. By JAMES MACKENZIE, M.D. Pp. xx., 325. Edinburgh: Young J. Pentland. 1902.—The standpoint of the author is revealed in the following sentences from the preface: "Whilst I may have occasion to refer to what I consider the erroneous view of others, I am conscious

that where so many more competent observers have erred, it is but likely that I should go astray. In writing this work the necessity therefore has been kept distinctly in view of giving a clear conception of the facts as distinct from the theories." The illustrations are very numerous, and throughout the work the author constantly refers to sphygmographic tracings to support the views enunciated. Many questions of practical interest are ably discussed. Such, for instance, as the supposed delayed radial pulse resulting from aneurysm of the aorta, etc., which the author demonstrates very clearly to be a fallacy. The work is worthy of a high place in medical literature.

Guy's Hospital Reports. Vol. LVII. London: J. & A. Churchill. 1902.—Dr. W. Hale White describes two cases of acute rheumatoid arthritis, and, like many other observers, concludes that it is a separate disease, which has no association with the chronic forms. Dr. Frederick Taylor and Mr. Arbuthnot Lane record two cases of volvulus, treated by resection of the twisted bowel. One of these cases was successful, but it is to be hoped that this will not induce others to follow a practice which must be more dangerous than the simpler method of first forming an artificial anus and draining the distended bowel. Various other papers make up a volume of more than usual excellence.

Transactions of the Medical Society of London. Vol. XXV. London: Harrison and Sons. 1902.—This record of the 129th session of the Medical Society of London contains the usual assortments of papers on many subjects, and is a record of much original work, and of views which have not yet found their way into the text-books. The debate on cardiac pain, which was opened by Dr. Markham Skerritt, was of great interest, and is worthy of renewed study. It directs especial attention to the fact that "pain that is the expression of the distress of the heart under too heavy a load of work is met with in all degrees of intensity, from slight and trivial discomfort at the one extreme up to the overwhelming agony of the classical angina pectoris at the other. There is no line of demarcation, either clinical or pathological; the distinction is one of degree only, and not of character." The annual oration, by Dr. Stephen Mackenzie, reviewed "the powers of natural resistance, or the personal factor in disease of microbic origin," and concluded with the remark that "we must never forget that the *soil* is of as great importance to study as is the *seed* in the proper understanding and treatment of diseases of microbic origin."

Edinburgh Medical Journal. New Series. Vol. XII. Edinburgh: Young J. Pentland. 1902.—The most noteworthy contributions of this volume are the series of Morison Lectures, by the Editor, Dr. G. A. Gibson, on "The Nervous Affections of the Heart." After a careful survey of the character and nature of sensory disturbances of the heart, he observes that

these sensory affections of the circulation are, in truth and in deed, wonderfully amenable to careful management. A study of the author's experiences in cardiac therapeutics will give most readers an increased power of arresting death, and of guiding patients through critical periods which, if neglected, must end in death, but which, after the crisis is over, may not recur for years.

Rough Notes on Remedies. By Wm. Murray, M.D. Fourth Edition. Pp. xi., 176. London: H. K. Lewis. 1901.—This edition of a work which is at least attractive, even if the writer's dicta are not altogether accepted, is enriched with some "annotations to correct misapprehensions, and to make the meaning in the original text clearer." Thus the treatment of chorea by fifteen-minim doses of Fowler's solution has been continued for two or three weeks by some readers with unfortunate results. The author points out that if it does not act as a cure in a week it must be stopped. Three such doses a day may be given during meals to a child of 12 or 15 years when chorea is present, but it must be stopped in a week or sooner if irritation is set up. He finds that arsenic, which he recommended in diabetes, fails in some cases and succeeds admirably in others. The latter seem chiefly those which follow on worry and overwork, while in gouty glycosuria and in diabetes of young people it is rarely of use. He advocates as warmly as ever his large doses of blue pill in some forms of heart disease, and adds that many correspondents attest its value. As to another remedy, nitrate of silver in epilepsy, he has been rather disappointed. Since so many cases do well on bromides, with strontium bromide or borax added, he now keeps the nitrate of silver, with its disfiguring results, as a last resource, and then he administers it for nine months. A chapter on Rothbury, in Northumberland, as a health resort, gives a glowing account of the place as a bracing spot, especially adapted for city men who are "run down," and for patients in the early stages of phthisis. It seems a pity that the preface should be embellished with a "prodigious yarn" from a correspondent, as to the efficacy of some treatment, which reads like Mark Twain's prescription of two fair-sized whales as the amount of fish his patient should swallow.

Taschenbuch der Massage. Von Dr. Erich Ekgren. Pp. 90. Berlin: S. Karger. 1903.—This work, the author states, is written for medical men who have no time to study larger handbooks on the subject. It gives a short and accurate description of the different manipulations used in various cases, and also of the exercises most suitable as an auxiliary treatment. The chapter on gynæcological massage is treated somewhat more in detail.

The Blood: How to Examine and Diagnose its Diseases. By Alfred C. Coles, M.D. Second Edition. Pp. x., 286.

London: J. & A. Churchill. 1902.—This book not only deals with the subject in an extremely masterly way, but at the same time presents it in an easily understood and readable form. The subject is one which requires expert handling, and the details are so clearly explained that a beginner is often able, by following them, to get very good results. We have tried for some years many of the methods, and find them very satisfactory. There is one method of fixing films which we have found very useful, and which is not mentioned; viz., that of heating for fifteen minutes on a copper plate at the spot where a drop of xylol boils; this is especially useful with the triacid stain. The chief changes in this edition are in the sections on malaria and filaria, both of which are brought up to date and very fully dealt with. We can thoroughly recommend this as the best clinical book for general practice.

Manual of Bacteriology. By ROBERT MUIR, M.D., and JAMES RITCHIE, M.D. Third Edition. Pp. xviii., 548. Edinburgh and London: Young J. Pentland. 1902.—The third edition of this excellent text-book contains many modifications and additions, which greatly enhance its value and bring it thoroughly up to date. The new matter includes chapters on the bacteriology of the air, soil, and water, and the standardisation of media. The group of "acid-fast" bacilli resembling the tubercle bacillus are also dealt with, and the subject of the "short" forms of diphtheria bacilli, or pseudo-diphtheria bacilli, is also discussed, but in rather too brief a form. The chapter on immunity has been remodelled so as to include recent observations, and prominence is here given to the theories of Ehrlich. New illustrations are introduced, and the illustrations generally are of a very high standard of excellence.

Hygiene and Public Health. By LOUIS PARKES, M.D., D.P.H., and HENRY KENWOOD, M.B., D.P.H. Second Edition. Pp. x., 763. London: H. K. Lewis. 1902.—The issue of a second edition of this work within a year of the appearance of the first edition is a sufficient guarantee of the popularity of the work. A few alterations of the text have brought it thoroughly up to date. The book is eminently suitable for the purpose of preparation for public-health examinations.

Second Progress Report of "The Campaign against Mosquitoes in Sierra Leone." By M. LOGAN TAYLOR, M.B. **Report of the Sanitary Conditions of Cape Coast Town.** By M. LOGAN TAYLOR, M.B. The University Press of Liverpool. 1902.—These two excellent reports should be in the hands of all persons residing in malaria-infected districts. They afford a clear and succinct account of the measures to be taken in order to suppress the multiplication of mosquitoes and insanitary conditions generally, which lead to the high sickness rate prevalent in tropical countries.

Editorial Notes.

University College Colston Society.

The question of our National Education is just now, fortunately for our country, an uppermost topic in the mind of every thinking man; hence a special interest attaches to the Fourth Annual Meeting of this Society, which has a twofold object—the wider support of the University College Bristol, and the furthering of the scheme for a Western University in Bristol.

The President for the year was the Lord Bishop of Bristol, himself a weighty authority on Educational matters. In the course of his speech he said that they talked about the nation falling behind in commercial enterprise and success. He felt strongly that technical education should be more rightly termed technical teaching, which was exceedingly good for the training of hands. It was not, however, hands that would dominate commerce: it was brains, and it was brains that they had to develop. There was no question at all that in commerce, in warfare, and in all other departments, brains were now ruling the world; and more and more would this be so. Unless they could bring to the services of the country, in every walk in life, a larger proportion of brains than up to this time had been done, they were bound to go behind other nations which recognise that brains rule, and would continue to rule, the world.

Mr. J. W. Arrowsmith, the indefatigable honorary secretary, to whose initiation the Society owed its birth, was happily enabled to announce several additional special donations to University College, which, with sums promised subsequent to the dinner, provided the £3,000 necessary to secure the generous offers of £1,000 each from Sir W. H. Wills, Bart., and Sir Frederick Wills, Bart., M.P., to which we alluded in a previous issue. Moreover, the subscriptions to the Society for the year exceeded £400. All this shows that the Colston Society has proved a very practical medium for obtaining valuable additional

support for the University College; and we may cordially congratulate the President, the Lord Bishop of Bristol, and Mr. J. W. Arrowsmith, on a very successful year's proceedings.

List of Special Donations to University College.

	£	s.	d.
Wills, Sir W. H., Bart....	1000	0	0
Wills, Sir Frederick, Bart., M.P.	1000	0	0
Fry, Francis J., J.P. ...	500	0	0
Fry, J. Storrs	500	0	0
Fry, Right Hon. Lewis...	250	0	0
Fry, Albert, J.P.	250	0	0
Fry, A. M.	250	0	0
Worsley, P. J., J.P. ...	250	0	0
Thomas, Harry E.... ...	250	0	0
Arrowsmith, J. W., J.P.	250	0	0
Robinson, Edward, J.P.	250	0	0
Shipley, A., J.P.	250	0	0
Baker, Hiatt C., J.P. ...	250	0	0
Wills, G. A., J.P.	100	0	0
Robinson, Arthur	50	0	0
Wills, H. H.	50	0	0
The High Sheriff of Bristol	10	10	0
Swann, E. J., J.P.	10	10	0
Fry, G. Falconer	10	10	0
Anonymous	5	0	0
Nash, Herbert	5	0	0
Whittuck, A. E.	5	0	0
The Lord Bishop of Bristol	*3	10	0
	£5500	0	0

* To make total £5500 : 0 : 0

The Right Hon. H. Hobhouse, M.P., strongly supported the movement for a local university. This was the moment when University College might hold out its hands to the adjoining counties. In the West of England Bristol had an unrivalled situation and an unrivalled opportunity. They had merchant princes still alive in the good old city, and he believed Mr. Arrowsmith's wish would be realised. A provincial university would be the university of the future, and Bristol would be known as the educational capital of the West of England.

Sir J. Crichton Browne, F.R.S., the guest of the evening, remarked that the University College had made itself responsible for a scheme of great magnitude, of far-reaching significance—a scheme for a university located in the city of Bristol. They were all familiar with the objections to the multiplication of universities; but these objections came a little too late in the day, and they were futile in view of the pressing educational wants of the hour. Bristol had long possessed breadth and culture greater than some other towns already endowed with universities. They wanted a group of national universities, which should collectively meet the higher educational needs of the whole country—a group of universities, each specially adapted to its environment, but all affording the amplest instruction, the finest culture, the best discipline of the day. And that group of English universities would be incomplete if

a university of Bristol did not find a place in it. If Liverpool obtained the charter they asked for, then, without doubt, they would have modern universities at Liverpool, Leeds, Manchester, Durham, Birmingham, and Cardiff. A great educational upheaval was going on. An extension of their English university system was inevitable; and it was to be hoped that a university of Bristol would make its appearance. Their Merchant Venturers' Technical College was, he believed, unsurpassed in the liberality of its arrangements, in buildings, equipment, and teaching power. Their University College was excellent: it was fortunate in having had on its professionale a number of men of marked ability, and some who had advanced to European reputation.

* * * * *

Bristol's Awakening: This phrase is just now in the mouths of every Bristolian in connection with the proposed new railway. We are not now concerned with the arguments in favour of or against such a scheme; but one thing is certain, that no commercial awakening can be completely successful that does not recognise, as Scotland and Germany have long realised in a very practical manner and with corresponding commercial success, that universities for the people are essential factors in the development of brains. It is not Bristol alone that is so deeply concerned in the promotion of this University Scheme, but the whole West of England; and if some one or more individuals, who have it in their power to do so, would give a large sum sufficient to immediately ensure the successful application for a charter, it would undoubtedly do a great deal for the commercial prosperity, as well as the culture and enlightenment, of the West of England, and benefit all classes of the community.

* * * * *

Ventilation of Sewers. Attention has recently been directed by the *Lancet* Special Sanitary Commission (January 17th, 1903) to the fact that Bristol has been a pioneer in developing the idea that it is not necessary to take any trouble whatever about ventilating sewers, for the favourable vital statistics of Bristol are obtained

in spite of the statement that there is no ventilation of any kind for the sewers. It is admitted, however, that an air-tight sewer is an impossibility: it is true that there are no grids ventilating the sewers on the street levels; it is even true that there are no ventilating shafts constructed for the purpose; but it is not true that there is no ventilation of the sewers. Statistics do not supply any evidence that the unconscious ventilation prevalent at Bristol gives worse results than the conscious ventilation applied in other towns. But it is pointed out that "every town has not got a tidal river to occasion the pumping of air in and out of the sewers twice a day. Nor is every town built at the bottom and up the sides of a basin as is Bristol. Every town has not the same proportion of newly built self-cleansing sewers running down precipitous hills. Every town has not got the same proportion of soil-pipes prolonged over the roof of the houses ready to act as sewer ventilators as in Bristol; and, above all, every town is not constantly swept and purified by the pure sea winds from the Bristol Channel."

* * * * *

Electro-Therapeutic Work in Medicine and Surgery.

GREAT developments are being made in the adaptation of light and electricity to therapeutic purposes. In spite of the reasonable prejudice which exists against methods which have been so much be-quacked in the past, we are bound to admit that the recent adaptations of electricity are such that we cannot afford to leave them in the hands of the charlatan, and they are becoming most valuable in the treatment of conditions which are for the most part highly intractable to other methods. We desire to direct attention to an outline of recent electro-therapeutic work given by Dr. John Macintyre (*Glasgow M. J.*, lviii., 1902, 341); and the paper by Dr. A. J. Harrison (p. 23) gives some of the earlier results obtained by means of the excellent installation which the munificence of a Bristol citizen has placed at the disposal of the staff of the Bristol General Hospital. We hope to receive from time to time further

reports of the good work now being carried on in these departments at both of our large hospitals.

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The Therapeutics of a Sea Voyage.

Dr. Roxburgh directs our attention (page 1) to a topic which is getting to be a little out of date. Thirty years ago the sea voyage was everything in the treatment of chest diseases, but the high-altitude methods became popular, and the sea level correspondingly became unpopular. But now that altitude has been declared to be nothing, and abundance of fresh air everything, there is every reason why the sea voyage should be reinstated in its former position as one of the best methods of treatment of tubercular diseases. The deck of a ship in motion must be the ideal spot for a patient requiring air without fatigue; and therefore a succession of voyages should be excellent treatment for our consumptives, if it be adopted early and not as a dernier resort. Some comments on "long sea voyages for chest diseases" made by the writer in 1876 (*vide Brit. M. J.*, 1876, ii. 360) are still appropriate, and more especially as to the necessity for early diagnosis and treatment in order that the treatment by sea voyage may be successful.

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Winsley Sanatorium for Consumptives.

The Committee of the Gloucester, Somerset, and Wilts branch of the National Association for the Prevention of Consumption hope to commence building the Sanatorium at Winsley immediately. It has been found desirable to somewhat modify the original scheme, and the new plans have been submitted to the Committee which provide for the erection of an administration block for sixty patients and a building to contain twenty beds. The blocks for the remaining forty beds, to complete the scheme, can be added when the necessary funds have been raised.

The donations promised and paid up to the present amount to £9,437, and £3,649 has been expended in the purchase of land, preparation of the site, surveyor's fees, legal charges, advertising, and secretarial expenses, etc., leaving a balance of

£5,788. As at least £6,500 is required for the erection of the administration block and accommodation for twenty patients, exclusive of furniture and fittings, a large additional sum is required immediately. There is no doubt that the Sanatorium is urgently needed, and we have good reason to expect that the philanthropic public will provide the requisite amount, which is really very small when one considers that the whole of three populous counties are directly interested in the work.

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Notification of Phthisis.

Compulsory notification does not meet with general approval, and has generally been considered to be unnecessary and impracticable. A modified voluntary method has been adopted in many places, but can only be of partial application and of doubtful utility. A writer in the *Medical Review* (January, 1903, p. 2) thinks that "compulsory notification of every case of tuberculosis is unnecessary and undesirable. But notification of all cases of 'tuberculosis with discharge' would be beneficial if isolation were enforced and the necessary accommodation provided. Whether notification of tuberculosis is enforced or not every room in which a tuberculous patient has died should be disinfected. In Vienna this has long been done by the authorities from information derived from death certificates, without the aid of notification. If any technical difficulties exist in England in employing death certificates for this purpose it would be easy to make it incumbent on the practitioner to notify to the sanitary authority every case of death from tuberculosis."

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Notification in Bristol.

The following extracts from the Report to the Health Committee on the Notification of Phthisis, from Dr. D. S. Davies, the Medical Officer of Health of the City of Bristol, are of general as well as of local interest.

"Your Committee will remember that in April, 1899, I pointed out that initial measures towards notification had been attempted by the distribution of leaflets since 1891, prescribing

the necessary precautions to be observed in regard to consumption, and by offering disinfection in houses where a consumptive person has resided, or after death. Following the suggestion of that Report, your Committee authorised the taking of samples of incoming milk from the surrounding districts for tubercle, and this was duly carried out for several months, fortunately with very encouraging results as to the apparent absence of tubercle from the great majority of such supplies. It was also resolved to frame all milk and meat contracts for the city hospitals on lines protective against tubercle. The Report also advised the provision of public slaughter-houses and the adoption of a voluntary system of notification of phthisis, but these suggestions were not at that time adopted.

Several districts have since made experiment in such voluntary notification, and with their experience to guide us, it is, I consider, expedient to consider definitely the adoption of this procedure in Bristol, as it is generally found that, with the necessary medical organisation, considerable benefit may be expected to result to the health of the district.

The plan found most effective in introducing voluntary notification is:—

1st. To circulate to every house in the city a copy of my leaflet of simple precautions to be observed in regard to consumptive patients, and in regard to houses inhabited or vacated by consumptive patients or in which consumptive patients may have died.

2nd. To circulate amongst publicans, owners and occupiers of workshops and workplaces, on public hoardings and in other public places, notices and handbills calling attention to simple precautions, and especially as to the danger of spitting.

3rd. After an interval of six months, again to distribute leaflets to every house in the city.

4th. To then invite notification of phthisis (consumption of the lungs only) from the district Medical Officer of the Guardians, and from the Medical Officer of dispensaries.

5th. At the same time to make provision for the examination of samples of phthisical (consumptive) expectoration free for medical men.

6th. To then finally initiate a general system of voluntary notification, together with the necessary administrative complement, medical, clerical, inspectorial and cleansing, for the due execution of the detailed work thus demanded. These details I am prepared to advise upon as they become necessary.

The question of sanatoria hinges very largely upon notification, from which it is possible not only to learn the extent of sanatorium accommodation called for, but also to get early information of cases, so as to control them in the stages when preventive treatment is most likely to succeed."

* * * * *

THE appointment of Mr. Leopold Statton as Chief Clerk to the department of the Medical Officer of Health for Bristol is an incident in the history of the Bristol Medical Library which calls for notice in these pages. From 1893, when the Library, as we know it, was formed, Mr. Statton as its clerk has been a real help to all its frequenters. He came to it equipped with an extensive knowledge of library work, acquired at our Museum and Library during many years, and he soon added to that knowledge a thorough bibliographical familiarity with our medical books and the special needs of the Library. His readiness to place his information at the service of anyone seeking his assistance made it a real pleasure to turn to him in any bibliographical difficulty. We are sorry to lose him, but wish him all success and happiness in his new work.

Mr. Fred. Farr, who worked with Mr. Statton for several years as assistant, has been appointed as the Librarian.

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Gordon Memorial College, Khartoum.

DR. ANDREW BALFOUR, of Edinburgh, has been appointed Director of the Chemical and Bacteriological Research Laboratories of the above College. These laboratories are designed "to promote technical education and the study, bacteriologically and physiologically, of tropical disorders, especially the infective diseases of both man and beast peculiar to the Soudan, and to render assistance to the officers of health and to the staff of the civil and

military hospitals; to aid criminal investigations in poisoning cases (which are frequent in the Soudan) by the detection and experimental determination of toxic agents, particularly the obscure potent substances employed by the natives; to carry out such tests in connection with water, food stuffs, and health and sanitary matters as may be found desirable; and to undertake the testing and assaying of agricultural, mineral, and other substances of practical interest in the industrial development of the Soudan." It will be remembered that the foundation of these laboratories was due to the scientific enthusiasm and generosity of Mr. Henry S. Wellcome. We believe that, with Dr. Balfour as director, the work done in these laboratories will do much for the development of the Soudan and for the general benefit of mankind.

Notes on Preparations for the Sick.

Kefir and Kefir Powders.—AYLESBURY DAIRY COMPANY, London.—Kefir is a product of the fermentation of milk which has undergone a preliminary sterilization by special ferments derived from Kefir grains. Careful selection of the organisms present in the grains has resulted in the preparation of a ferment which produces lactic acid fermentation from milk sugar, and has a slight proteolysing action on the proteids. The resulting beverage is thick from the precipitation of the casein in a very finely divided form, and foams slightly from the presence of carbonic acid. The mean composition of Kefir is as follows:—

Water (including a little CO_2) ...	89.99 per cent.
Alcohol	0.70 ,,
Lactic Acid	0.73 ,,
Fat	2.05 ,,
Sugar	2.40 ,,
Casein	2.90 ,,
Albumin	0.21 ,,
Albumoses	0.30 ,,
Mineral Matter	0.72 ,,

In the mouth the pleasantly acid taste, due to the lactic acid, stimulates the secretory glands and promotes an increased flow of saliva, preventing the mouth from becoming dry. In the

stomach both the lactic acid and alcohol act as gastric stimulants; the casein being already precipitated in small masses, and separated from the salts with which it is combined in milk, cannot be curdled by the ferment of the stomach, and therefore there is no formation of compact masses, which pass undigested through the intestines, as with milk. As the casein contains all the organic phosphorus, and most of the iron and sulphur, it is seen that milk does not provide sufficient nourishment in this respect; the use of Kefir, on the other hand, supplies these important constituents, and this explains its value in chlorosis, anæmia, scrofulous disease, in convalescence, and in diseases where malnutrition of tissue occurs.

The powders are used for the preparation of Kefir at home. A pint of milk is raised to boiling point in a saucepan, and rapidly cooled to 70° F. by standing it in a convenient vessel in cold water; one powder is dissolved by stirring or shaking in the milk. The mixture is poured into a clean champagne bottle, which is securely corked, and kept on its side at a temperature of from 60° to 70° F. The bottle must be gently shaken two or three times a day, and in two to three days the Kefir is ready for consumption. If kept on ice, after the third day the Kefir can be preserved in good condition for a week or more.

Calcusol.—Alfred Bishop, Limited, London.—This is a granular effervescent piperidine para-sulphamine benzoate in combination with bicarbonate of potash, in proportion of ten grains of the latter with five of the former in each drachm dose. It should be of use in the multiple and varied conditions which may be traced to uric acid. This salt of piperidine has the composition, $SO_2 NH_2 C_6 H_4 COOH C_5 H_{11} N$. It is neutral, freely soluble in water, and not toxic even in large quantities. It appears to be the best preparation yet devised for the solution of uric acid depositions, whether in the joints or elsewhere.

Petanelle.—Paté, Burke, & Co., 6 Wool Exchange, London. —This preparation of fibrous peat appears to be of great value to those who suffer from perspiring and malodorous feet, inasmuch as the Petanelle foot-powder has proved itself to be of use for the relief of overheated and tender feet. It is deodorant, antiseptic, and absorbent. A little in the boot is sufficient, as it is not necessary that the powder should be in immediate contact with the skin. Petanelle obtained the Grand Prix at Ostend, 1901.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in December:

February 28th, 1903.

Boston Medical Library (1)	10 volumes
The General Medical Council (2)	1 volume
L. M. Griffiths (3)	1 ,,
Medical and Chirurgical Faculty of the State of Maryland (4)	1 ,,
Pathological Society of London (5)	1 ,,
Society for the Study of Disease in Children (6) ...	1 ,,
The Surgeon-General, United States Army (7) ...	1 ,,

FORTY-SEVENTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented The books to which no such figures are attached have either been bought from the Library Fund or received through the *Journal*.

Bell, R. ... ... *Cancer*... 1903

Catalogue (Index) of the Library of the Surgeon-General's Office, United States Army (7) 2nd Ser. Vol. VII. 1902

Crocker, H. R. . *Diseases of the Skin.* 2 vols. ... ... 3rd Ed. 1903

Delamotte, W. A. *An Historical Sketch of St. Bartholomew's Hospital* ... 1844

Dickinson, R. C. Norris and R. L. *A Text-Book of Obstetrics.* 2 vols. 2nd Ed. 1902

Fenwick, S. and W. S. *Cancer and Tumours of the Stomach* 1902

Fox, G. H. ... *Photographic Atlas of the Diseases of the Skin* 1902

Goadby, K. W. ... *The Mycology of the Mouth* 1903

Gould, G. M. ... *Biographic Clinics* 1903

Hall, I. W. ... *The Purin Bodies of Food Stuffs* 1902

Harrison, R. ... *The Ambulance in Civil Life on Land and Sea.* 5th Ed. 1902

Haultain, F. W. N. *A Practical Handbook of Midwifery* ... ... 2nd Ed. [N.D.]

Helferich, H. ... *Atlas and Epitome of Traumatic Fractures and Dislocations* (Edited by J. C. Bloodgood) ... 5th Ed. 1902

Henderson, E. ... *The Nurse in Hot Climates* 1903

Herman, G. E. ... *Diseases of Women* ... ... Revised [2nd] Ed. [N.D.]

Hewer, Mrs. J. L. *Our Baby* ... ... 8th Ed. 1902

Kuhn, P. ... ... *Inoculation against Malaria* (Tr. by H. A. Nesbitt) ... 1902

Latham, A. ... *Pulmonary Consumption* 1903
Mackenzie, J. ... *The Study of the Pulse* 1902
Maddox, E. E. ... *Golden Rules of Refraction* ... ... [N.D.]
Moullin, C. M. ... *The Surgical Treatment of Ulcer of the Stomach* 1902
Norris and R. L. Dickinson, R. C. *A Text-Book of Obstetrics.* 2 vols. 2nd Ed. 1902
Scudder, C. L. ... *The Treatment of Fractures* ... ... 3rd Ed. 1902
Smith, G. [Ed.].. *Physician and Friend—Alexander Grant, F.R.C.S.* ... 1902
Strange, W. ... *The Seven Sources of Health* ... ... (3) 1864
Taylor, M. L. ... *Second Progress Report of the Campaign against Mosquitoes in Sierre Leone* 1902
,, ... *Report on the Sanitary Conditions of Cape Coast Town...* 1902

TRANSACTIONS, REPORTS, JOURNALS, &c.

American Journal of Obstetrics, The (1) Vols. XIV., 1881; XXIII., 1890; XXV. 1892
Archives de Neurologie ... ... Tomes XIII., XIV. 1902
Association of American Physicians, Transactions of the. Vol. XVII. 1902
Boston Medical and Surgical Journal, The (1) Vols. LXVII., 1863; XC., 1874; XCII.—XCV., 1875-76; XCIX. 1878
British Almanac, The 1903
British Medical Journal, The ... ... Vol. II. for 1902
Bulletin de l'Académie de Médicine de Paris. Tomes XLV., XLVI. 1901
Catalogue of Current Literature, The Reference ... ... 2 parts 1902
Clinical Journal, The ... ... Vol. XX. 1902
Echo medical du Nord, L' ... ... [Vol. VI.] 1902
Edinburgh Medical Journal, The ... ... N.S., Vol. XII. 1902
General Medical Council, Minutes of the ... . (2) Vol. XXXIX. 1903
Glasgow Medical Journal, The ... ... Vol. LVIII. 1902
Hazell's Annual 1903
Hospitals—
Guy's Hospital Reports ... ... Vol. LVII. 1902
Johns Hopkins Hospital Reports, The Vol. X., Nos. 6-7-8-9 1902
St. Bartholomew's Hospital Reports ... ... Vol. XXXVIII. 1903
Journal of Cutaneous and Genito-Urinary Diseases ... ... Vol. XX. 1902
Lancet, The ... ... Vol. II. for 1902
Medical and Chirurgical Faculty of the State of Maryland, Transactions of the ... ... (4) [1902]
Medical Chronicle, The ... . 4th Ser. Vol. III. 1902
Medical Directory, The 1903
Medical Press and Circular, The ... ... [Vol. CXXV.] 1902
Medical Record ... ... Vol. LXII. 1902
Medical Society of London, Transactions of the ... ... Vol. XXV. 1902
Medico-Chirurgical Transactions ... ... Vol. LXXXV. 1902
New Hampshire Medical Society, Transactions of the 1902
Odontological Society of Great Britain, Transactions of the Vol. XXXIV. 1902
Otological Society of the United Kingdom, Transactions of the Vol. III. 1902
Pathological Society of London, Transactions of the (5) Vol. LIII. 1902
Public Health ... ... Vol. XIV. [1902]

Quarterly Medical Journal, The	Vol. X.	1902
Révue de Thérapeutique médico-chirurgicale		1902
Scottish Medical and Surgical Journal, The	Vol. XI.	1902
Smithsonian Report, 1901		1902
Society for the Study of Disease in Children, Reports of the	(6) Vol. II.	1901-2
Univ. of Penna. Medical Bulletin	Vol. XIV.	1902
West London Medical Journal	Vol. VII.	1902
Whitaker's Almanack		1903
Who's Who		1903

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

December 10th, 1902.

Mr. G. Munro Smith, President, in the Chair.

Dr. Walter C. Swayne showed a **specimen of cystic fibroid of the uterus removed by panhysterectomy.** The patient was a multipara, aged 53. An abdominal tumour had been noticed for two years. Then menorrhagia and, later metrorrhagia, occurred, the latter persisting from May to October of this year. When seen by the speaker the hemorrhage was fairly free and fœtid. As malignant disease was suspected, it was decided to explore and curette the uterine cavity. The uterus was then found to be myomatous. Hemorrhage occurred again in November, but only in small amount. Then panhysterectomy was performed. A gush of fluid followed the introduction of the myoma-screw. On section of the uterus after removal, a large cyst was found in the wall of the uterus on the left side near the fundus, and near this a second one, and in another place a third. Microscopical examination had shown that the tumour was a myoma, and the sections showed a rather curious condition which illustrated the origin of the cysts. Canals were seen with myxomatous cells in their interior. In certain places there were larger spaces, some filled with myxomatous cells, apparently lined with endothelium. Since the operation a slight watery vaginal discharge had been observed which the speaker had reason to believe came from a ureter, probably the result of a small slough.

Mr. T. Carwardine showed **a patient whose left lung had been drained.** The patient was a man of 37, who had bronchiectasis and a fibroid condition of the lower lobe of the left

lung. At the time of operation he had been very ill, and expectorating a pint of fœtid sputum daily. It was considered that his only chance of recovery was to drain the affected portion of the lung. Three pieces of rib; viz., of the seventh, eighth, and ninth, each about four inches in length, were removed posteriorly. At a second operation it was intended to remove a portion of the lung to drain the bronchial tubes. After cutting into the lung a certain distance a cavity was found containing fœtid pus. The cavity was packed, after arresting hemorrhage with ligatures and the cautery. After the operation the expectoration soon became quite sweet, and now there was no expectoration at all. The patient could blow air through the drainage-track. It was intended to make the opening a permanent one.—Dr. MARKHAM SKERRITT remarked that the operation had given better results than were usually obtained in such cases. Physicians had several times diagnosed and localised cavities which surgeons had been unable to find at subsequent operations.

Dr. F. H. EDGEWORTH read a paper on **some of the initial signs of pleurisy.**—Mr. H. F. MOLE mentioned that cases of pleurisy were met with entirely without pyrexia.—Mr. ROGER WILLIAMS stated that in the form of pleurisy met with in association with pelvic tumours none of the above symptoms were usually found. The relations between the pelvic tumour and the pleurisy were not clear. It was met with in ordinary cases of ovarian cyst, but more commonly in cases of malignant tumours of the pelvic organs. According to the embolic theory the tumours, by compressing the pelvic veins, led to thrombosis and embolism, then set up pleuritic inflammation. Sometimes the pleurisy was due to malignant metastasis. In these cases there were hardly any initial symptoms, the first indication of pleurisy often being the discovery of effusion.—Dr. D. A. ALEXANDER alluded to the possible co-existence of peritonitis and pleurisy, though in other cases the abdominal symptoms were reflex.—Dr. MICHELL CLARKE pointed out that when a pleuritic rub was found together with abdominal pain it was very necessary to bear in mind the possibility of the primary seat of infection being in the abdomen, and of the infection having spread through the diaphragm. Pure diaphragmatic pleurisy seemed to be an extremely rare affection, *i.e.*, when not due to a primary abdominal lesion. With regard to hæmoptysis, he held the view that the majority of the cases with that symptom were tubercular in origin. The absence of the physical signs of a tubercular affection did not exclude its existence, and the cases should be carefully watched. Tuberculin might be injected in doubtful cases to clear up the diagnosis.—Dr. MARKHAM SKERRITT said that until recently the view had been taken that nearly all cases of pleurisy were tubercular. He would be very doubtful himself as to the absence of tubercle in a case which

began with hæmoptysis. It was rare to find a pure diaphragmatic pleurisy, but the diaphragm might bear the brunt of the attack. He had recently seen a case in which there was great tenderness anteriorly, due to pleuritis existing posteriorly. —Dr. WATSON WILLIAMS alluded to the practice in Germany of giving iodide of potassium in cases in which tuberculosis was suspected. If local manifestations arose then the fact was regarded as evidence of tubercle. The pain in pleurisy was often referred, and he always carefully examined the whole course of the nerves along which the pain was referred. He described a case he had recently seen in which pleurisy with effusion ran its course without any pain. He was inclined to think the less acute cases, those with the less-marked clinical signs, were the most likely to be tubercular.

Dr. J. O. SYMES read a paper on the **presence of diphtheria bacilli in atrophic rhinitis.** In true atrophic rhinitis there was pallor of the mucous membrane, atrophy of bone structures, formation of crusts, cachexia, and leucocytosis. The speaker had bacteriologically examined twenty-three cases. Of these twenty were females. The ages of the patients had varied from 9 to 57 years, the average age being 20 years, and the average duration 7 years. The ozœna was noticeable in all except one. In 87 per cent. of the cases he had found a bacillus present which resembled the Klebs-Loeffler bacillus. In 7 per cent. the bacillus mucosus had been found. A series of healthy noses had been examined in a similar way. In none of these had bacilli like diphtheria-bacilli been found, but in many a short bacillus of the Hoffman type was present. Was the long bacillus found in atrophic rhinitis the true diphtheria bacillus, or one which morphologically and culturally resembled it? The possibilities of error in answering this question were very great. The most satisfactory test was that by inoculating the bacillus into animals. In two of his cases this had been done, and the report stated that the bacilli were those of diphtheria, and virulent. The occurrence of the bacilli in these cases did not prove that they were the cause of the atrophic rhinitis. If they were the cause, then atrophic rhinitis had to be regarded as chronic diphtheria. In conditions simulating atrophic rhinitis; namely, syphilitic rhinitis, rhinitis sicca, etc., diphtheria-like organisms were not found, but the bacillus mucosus was frequently present. One of the speaker's cases of rhinitis, in which the bacillus had been found, had been excluded from school by the health authorities for nine weeks. Prof. Klein had reported the bacillus present to be a virulent form of the diphtheria bacillus. Frequent subsequent examinations had shown that the organism was constantly present. It was there even sixteen months after its first detection. — Dr. D. S. DAVIES alluded to the numerous difficulties diphtheria presented to those responsible for the health of towns. When the bacillus was found in the throats or noses of school children

it was difficult to see what other course than that of isolating the children could be taken. In some American cases the organism seemed to have persisted for ten or more years in the nasal sinuses. It was not settled what should be done in such cases. When he found them co-existing with cases of diphtheria he took a middle course with regard to isolation, and prevented the children from attending school.—Dr. WATSON WILLIAMS asked if the child whose case had been mentioned by Dr. Symes had associated with other children, and if so, what had been the result. A great many cases were going about with bacilli in the throat and nose indistinguishable from the diphtheria bacillus. He had tried the treatment of atrophic rhinitis with anti-diphtheritic serum when it was first recommended some six years ago, but had not obtained good results. —Dr. EDGEWORTH asked if there was any evidence that these cases were a source of the dissemination of diphtheria.—Dr. SYMES stated further investigations would be required before it would be possible to state that the organism described was a true diphtheria bacillus.

Mr. J. PAUL BUSH reported a case of **tumour of the stomach**, in which he had removed the growth and one-third of the stomach; and the patient, the specimen, and some lantern illustrations of the operation and of the structure of the growth were shown. The patient was a woman of 61, who had had good health until a year previously, when indigestion and loss of weight developed. Six months previously abdominal pain and vomiting began, and these symptoms had gradually increased. There was no history of hæmatemesis; there were no signs of gastric dilatation. A tumour, the size of the fist, was felt in the lower epigastric region. It moved with respiration. It could not be made out whether the tumour was in the stomach or the colon. At the operation it was found to affect the pylorus and the adjacent third of the stomach. Partial gastrectomy was performed; the duodenum was joined to the stomach end-to-end. The operation took two hours, and the patient was considerably collapsed at the end. On the third evening after the operation the patient had, by mistake, been given some bovril and cocoa. She retained this. Her recovery had been uninterrupted.—Dr. EDGEWORTH remarked that the symptoms, when he had seen the case, seemed rather to suggest that the growth was in the colon. In a similar operation, in which he had given the anæsthetic, he had injected a small quantity of atropine. Such an injection seemed to guard against the cardiac inhibition, which was otherwise liable to develop as a result of handling the stomach.

Prof. E. FAWCETT showed a **series of lantern slides illustrating the histology and development of the central nervous system in the embryo.**

January 14th, 1903.

Mr. G. MUNRO SMITH, President, in the Chair.

Mr. PAUL BUSH showed a specimen of **fibroid of the uterus removed by hysterectomy.** The fibroid, which was a moderately large one, had been impacted in the pelvis, and had caused intestinal obstruction, necessitating its removal. The patient was a woman of 67 years of age. The tumour had been easily detected on examination. Symptoms had only been noticed for a month. In conjunction with the fibroid, a papillary cyst of one ovary had been removed, and was shown in the specimen. For a fortnight after the operation the patient went on well; then pain in the right loin was noticed, and a few days later a large fluctuant swelling formed there. Through a lumbar incision about a quarter of a pint of pus mixed with urine was evacuated from the swelling. On analysis, the fluid which escaped was shown to contain urea, uric acid, phosphates, chlorides, and hippuric acid. The question as to the advisability of performing a further operation had to be considered. To determine whether the urine came from the ureter or bladder, methylene blue was first injected into the bladder and found not to colour the discharges from the wound; then the drug was given by the mouth, and very soon the pus was stained blue. It had been concluded therefore, that the urine came from an injured ureter. The abscess gradually healed up without a further operation.—Dr. W. HEY GROVES remarked on the nature of the cyst, and on that of the complication in the after-course of the case. He considered the complication had been a dangerous one.—Mr. J. LACY FIRTH agreed with the last speaker. The late formation of the abscess appeared to show that it had resulted from an injury to the ureter, which had led to secondary sloughing and leakage. It was interesting to note the advances which had been made in the methods of treatment of ureteral injury when the injury was discovered during an operation. Until about ten years ago the proper treatment had been considered to be nephrectomy; now attempts would always be made to suture the wound or the division in the ureter, or to engraft the proximal end on the bladder. If so much of the ureter had been accidentally removed that it was impossible to affect the junctions mentioned, even then nephrectomy need not be performed; instead, the ureter might be simply ligatured; the result in the majority of cases would then be atrophy of the kidney, and not the production of hydro-nephrosis.—Dr. WALTER SWAYNE alluded to a somewhat similar case, in which a ureter had been injured; but in his case the leakage of urine had been into the vagina. This still continued in slight degree, though the patient was in all other respects well.—Mr. BUSH remarked that the abscess, so far as he could judge, had been completely retro-peritoneal, and thought the leakage of urine had begun about the eighth day.

Dr. H. EDWARDS STACK showed **a series of contracted pelves**, of various types, obtained from various places. The set he had collected was almost a complete one for teaching purposes, and belonged to the Bristol Royal Infirmary. He considered the best classification of deformed pelves was a clinical one, and suggested that they should be considered in three main groups; viz., firstly, the pelves with slight deformity, and through which a living child might be delivered, though with more or less difficulty; secondly, those which did not permit of the delivery of a viable child, and so rendered craniotomy necessary; and, thirdly, those through which delivery was impossible. Dr. Stack then described the various specimens.—Dr. WALTER SWAYNE complimented the last speaker upon the fine collection of pelves he had exhibited. The classification of contracted pelves, according to their clinical effects, was better than that usually given in the books. The proportion of contracted pelves was very low in Bristol, and the Bristol women seemed very capable of bearing children, and also of bringing up children successfully.

Mr. A. W. PRICHARD reported a case of **rupture of the intestine**, successfully operated upon. The patient, a man of 22, had been struck in the abdomen by the shaft of a cart when cycling. When first seen by the speaker the patient was not collapsed. A rent in the rectus muscle was felt. Some hours later the patient became restless and vomited, and the abdomen was rigid. On opening the abdomen an irregular rent in the small bowel was found, the peritoneal coat being torn longitudially, the mucous and muscular coats transversely. No bowel contents had escaped. The mesenteric glands were enlarged, and there were tubercles in the peritoneum. Presumably paralysis of the bowel with absence of peristalsis explained the absence of extravasation of bowel contents into the peritoneal cavity.—In answer to Mr. MORTON, it was stated that no free gas had been found in the peritoneum.

Mr. H. G. KYLE read notes on **a case of perforated typhoid ulcer for which laparotomy had been performed.** (See p. 30.)—Dr. J. O. SYMES stated that the patient's death had not been due to the ulcer, the perforation in which had been successfully closed. He attributed the measure of success secured to the early diagnosis of the perforation by the house-surgeon, Mr. Martin, and to the promptness and rapidity with which the operation had been performed. In the obscurer cases of perforation of the bowel in typhoid fever, he considered that the following symptoms were of the greatest value in diagnosis:—(1) Pain. Without perforation there might be colicky pain, but severe and increasing pain was an important indication of perforation. (2) Profuse sweating. (3) Obliteration of the liver-dulness.—Mr. PAUL BUSH alluded to a case of perforation in which he had operated. The patient had died a week later

from a second perforation. He considered the outlook was very bad after operation in these cases. To excise a large portion of the bowel, he considered would be madness.—Mr. W. H. HARSANT had operated twice in such cases. Both patients died. He alluded to a case he had seen in which two other practitioners had urged operation, but he had refrained, feeling a doubt as to the existence of a perforation. The patient got quite well.—Dr. H. E. STACK considered the anæsthetic a source of danger in these cases, and that it was more dangerous than the incision. There was a possibility of spontaneous recovery without operation, and he had seen pathological appearances which seemed to show that this had occurred. The most important signs of perforation were some sudden change for the worse in the patient and a rise in the pulse rate. —Mr. C. A. MORTON considered it was thoroughly worth while to operate in these cases, and that there was no definite *post-mortem* evidence that recovery after perforation was possible without operation.—Mr. KYLE, in replying, stated there had been neither collapse nor rise in the pulse rate in his case.

Mr. H. F. MOLE read a paper on **two cases of ruptured tubal pregnancy.** *See* p. 39.—Mr. T. CARWARDINE mentioned a case in which there had been difficulty in diagnosing whether the condition present was due to ruptured tubal pregnancy or perforation of a gastric ulcer. He had had most difficulty in diagnosis in a case of torsion of the pedicle of a small ovarian cyst in association with pregnancy.

February 11th, 1903.

Mr. G. MUNRO SMITH, President, in the Chair.

The meeting was devoted to the exhibition and discussion of cases.

Dr. E. MARKHAM SKERRITT showed a man of 62 with **anomaly of blood-vessels.** The man was troubled with shortness of breath, and for eighteen months his right arm had not been so useful for work as before, having become weaker. The right carotid near the root of the neck was much diminished in calibre. The radial and brachial arteries had very weak pulsation, and had thickened walls. A conspicuous abnormal artery passed from the second right intercostal space in front outwards over the chest to the axilla. Obviously the obstruction of vessels was of long duration. There was no evidence of aneurysm nor of embolism. The obstructed vessels appeared to be of normal size, but to have thickened walls, and probably this thickening accounted for the obstruction.—Dr. H. WALDO mentioned a case he had reported some time ago, which was in many respects similar to the above, and in which he had felt sure the obstruction was due to syphilitic endarteritis.

Dr. H. Waldo showed: (*a*) A case of **Lupus Vulgaris** of both sides of the face. The left side had been treated with the Finsen light for eight months. The other side of the face had improved as well as that under the special treatment. (*b*) A case of **Lupus Vulgaris** affecting the right side of the face. Under the Finsen light treatment a patch on the buttock and one on the left cheek had been rapidly cured. The right side of the face had also improved. (*c*) A case of Folliculitis.

Mr. A. W. Prichard showed a case of **simultaneous amputation of both breasts for carcinoma.** The patient was 24 years of age. At the time of her admission to the Bristol Royal Infirmary there was a hard swelling in the left breast beneath a scar. The scar was that of an operation performed nineteen months before, in which a tumour had been removed which was thought at the time to be benign, but which the microscope had subsequently shown to be malignant. The recurrent tumour was the size of a hen's egg, and somewhat adherent to the skin and to the pectoral muscle, and with a hard prolongation passing to the axilla. In the right breast there was also a hard tumour, the size of a pigeon's egg, and a separate swelling in the skin above. In each axilla hard glands could be felt. The patient made a rapid recovery after the simultaneous amputation of both breasts. It was now only a month since the operation, and Mr. Prichard proposed later to report the patient's further progress to the Society.

Dr. J. E. Shaw showed a case of **sclerodermia, with pigmentation and muscular atrophy.** Paræsthetic numbness had first appeared in the hands, about a year previously, followed by a similar affection of the legs. Afterwards much weakness developed of both arms and legs. Pigmentation had begun to appear five months ago. Sclerodermia affected the neck and face on the left side, and the upper and front part of the chest. There was marked wasting of the muscles of the arms. The rigidity of the skin of the palms prevented closure of the fingers. Pigmentation affected the hands and forearms and the lower part of the abdomen, but not the axilla nor the buccal mucous membrane. Though not markedly wasted, the legs were so feeble that the patient could not rise from the ground without assistance. Twelve days' treatment with thyroid extract had produced considerable improvement.—Dr. Watson Williams asked if the case might not be one of myxœdema, resembling sclerodermia.—Dr. Kenneth Wills alluded to the fact that the wasting of muscles was not confined to the area affected with sclerodermia. He had noticed that the patient was sweating well.

Mr. Paul Bush showed: (*a*) An infant, seven weeks old with a **cystic swelling in the right cheek,** which had been present

since birth. The infant had been born without difficulty, and without the use of instruments. The swelling made the face asymmetrical. It was not a defined tumour, but a soft, elastic, somewhat diffuse thickening. It was translucent, and yielded clear fluid when explored with a needle and syringe. (*b*) A case of **obscure hip disease** in a youth of eighteen. Two years previously pain had been felt in the hip. He had been able to work all through the year 1902, and could still walk several miles, though he was a little lame. There was one inch of real shortening, which was due to alteration of the neck of the femur, not of the shaft. The movements were practically natural, except those of inversion and of abduction, which were diminished in range. The trochanter was elevated about three-quarters of an inch. A skiagram showed the angle of the neck of the femur was more acute than that of the other side (coxa-vara). (*c*) A case in which **the clavicle had been excised for sarcoma** in a girl of nineteen. The tumour had been noticed first, when quite small, eight months previously. It had steadily increased since, and had affected the middle third of the clavicle, extending four inches along the bone. The specimen was shown. (*d*) A case of **excision of the scapula for sarcoma** in a girl of sixteen. Two years previously pain had been first experienced. Three months later a swelling over the inner and upper part of the scapula had been noticed, and this had steadily increased. The inner two-thirds of the scapula were removed. There was a good deal of hemorrhage, and severe post-operative collapse. She had steadily improved since.—Mr. H. F. MOLE considered that the tumour in the cheek could not be a dermoid, because it contained clear fluid.—Mr. T. CARWARDINE alluded to a paper he had read at the Pathological Society, in which he had attempted to show that cystic-hygromata of the neck were developed in relation with the branchial clefts from epiblastic inclusion, and he believed in the case shown that the cyst had developed in relation with the intermaxillary cleft in that way.—Mr. J. LACY FIRTH said that the case of hip disease shown reminded him strongly of the case of double coxa-vara which he had shown to the society some years ago. The limitation of inversion and of abduction only were characteristic, and he had no doubt that the case was one of coxa-vara.

Dr. J. MICHELL CLARKE showed: (*a*) **A case of Graves' disease.** The patient was a woman of 32. Ten months before she had been in the hospital for exophthalmic goître. Last Christmas she developed shooting pains in the legs and pains like that of cramp, with weakness, so that the legs gave way when walking. The exophthalmos was marked on the right side, slight on the left. On the left leg there was a local patch of hyperidrosis. The patch was pigmented, with hair upon it, and it flushed when secreting. (*b*) A case of **intracranial tumour** in a man of 40. Eighteen months ago, after exposure to the sun, occipital

headache and vomiting came on. Similar attacks had gradually become more frequent, and for the last fourteen days had occurred every day. The patient had had five fits, with loss of consciousness since, and one well-marked epileptic fit on December 12th. Optic neuritis was present. (*c*) A case of **thoracic aneurysm with indirect signs.** For eighteen months there had been pain in the chest persisting on the right side. No pulsation could be discovered for many months. Last November pulsation and deficient resonance in the second right intercostal space developed, and there were deficient resonance, harsh breath-sounds, and occasional râles heard over the lower lobe of the right lung. The radial pulses were equal, and there was no tracheal tugging. (*d*) A case illustrating the **treatment of pancreatic diabetes by opium.** The patient was a boy of 16. He began to lose weight at 14. Last November he had been admitted to the hospital with weakness, drowsiness, and emaciation. In December he excreted about 12 ounces of sugar daily, and 108–116 ounces of urine. Diacetic acid and acetone were also present. He began to take liquor opii sedativus in the middle of the month, taking at first ♏x each day. Now he was taking ℥iss of tincture of opium daily, and excreting 48 to 60 ounces of urine with about 3 ounces of sugar, and had gained 10 lbs. in weight. None of the usual effects of opium were produced by the large doses given.

Mr. F. Richardson Cross showed: (*a*) Two patients for whom he had removed the lenses for high degrees of myopia. In one patient, as the result of the operation, vision had improved so much that, whereas before operation it had been $\frac{6}{24}$ with the use of −20 glass, now without a glass it was $\frac{6}{18}$. This patient was now anxious to have the other eye operated upon. In the second case vision before operation had been:

$$\begin{aligned} R\bar{c} \; -4 \text{ sph.} &= \tfrac{6}{6}. \\ L\bar{c} \; -20 \text{ sph.} &= \tfrac{6}{36}. \end{aligned}$$

Now, after operation in the left eye, vision in that was $\frac{6}{9}$ without a glass. Mr. Cross emphasised the advantages these operations conferred on the patients. (*b*) A case in which severe **ectropion of the eyelids** had been greatly improved by the application of Thiersch skin grafts. The condition of the cornea had much improved.

Dr. A. Ogilvy exhibited a **case of ruptured choroid**, showing the entrance of one of the ciliary arteries through the sclerotic. The patient had fallen and struck the eye on a water tap. A large white patch was seen in the region of the macula with a vessel coming through the sclerotic visible in it. Round a portion of the wound the torn edge of the retina was visible, turned back on itself. The floor of the patch was depressed and showed a good deal of pigmentation. On admission there had

been no perception of light, now it was $\frac{5}{24}$. Reasons were given for regarding the appearances to be due to rupture of the choroid rather than to congenital coloboma.—Mr. C. H. WALKER could not agree that the case was one of ruptured choroid. The appearances were exactly those of many cases of coloboma, and he thought the injury had occurred to an eye already affected with coloboma.—Mr. CROSS was also inclined to regard the case as one of macular coloboma.

Mr. C. H. WALKER showed a patient with (*a*) a **cyst of the iris**. There was a history of a wound with a chisel seven years previously. Dimness of sight had come on four or five weeks ago, and now vision was about $\frac{6}{18}$ in dull light. (*b*) A patient with **a strand of organised lymph in the anterior chamber** of the eye, the result of a wound from a broken wire nine years previously.

Mr. R. G. P. LANSDOWN showed: (*a*) A case of **amputation of the breast for carcinoma, with removal of rib**. At the operation the pleura had been opened and the lung had collapsed. Primary union without further complication had followed, and now, five months after the operation, the parts looked healthy. (*b*) A case of **atrophic scirrhus of the breast with secondary deposits**. Mr. Lansdown had advised operation four years ago, but it had been refused. The deposit in the left lower jaw was now half the size it had been, and a deposit in the pectoral muscle was undergoing atrophy also.

Dr. F. H. EDGEWORTH showed: (*a*) A boy of eighteen with **achondroplasia**. (*b*) A **case of acromegaly** in a woman. There was no evidence in the case of involvement of the optic chiasma. The patient had been shown two years before. The continuous administration of supra-renal and pituitary gland prevented the occurrence of pain in the arms, but it was doubtful if it had had any effect on the progress of the disease.

Mr. T. CARWARDINE showed a patient with **perityphlitic actinomycosis**. The patient had been successfully operated upon for appendicitis, and the wound healed up; but some weeks afterwards a swelling and two sinuses had gradually formed. From the discharges the ray fungus was obtainable.

Mr. H. F. MOLR showed: (*a*) A case of **Duchenne's birth palsy**. (*b*) A case of **injury of the testis**.

J. LACY FIRTH.

J. PAUL BUSH *(Hon. Sec.)*.

Obituary.

THOMAS JOHN COLMAN, M.D. Edin. 1868, M.R.C.S. Eng. 1864, L.S.A. 1865, whose decease took place in London on January 2nd, at the age of 60, will be long mourned by a large circle of medical, musical, and lay friends. He was a native of Bristol, and was a student at the Bristol Medical School; he afterwards went to Edinburgh, and became House Physician to the Royal Infirmary and Assistant-Physician at the Royal Edinburgh Asylum, Morningside. Before commencing private practice, he became House Surgeon at the Bristol General Hospital, and, later, he served for two years as Surgeon to the Bristol Royal Hospital for Sick Children and Women.

During the early years of his professional life he spent much of his time in the cultivation of his musical tastes. As a result of steady perseverance and long practice, his knowledge of music became both varied and wide, and his power of execution was of a very high order. He was much in demand at social functions, and his musical evenings were always very enjoyable. In spite of all this, he did not neglect his professional work, and his practice in all parts of Bristol grew rapidly to dimensions which were beyond the control and physical capacity of one who was never robust, and who found the fatigue entailed by incessant work to be beyond his strength. In 1887 Dr. Leonard Lees shared the labours of his practice, and continued to work with him for twelve years.

For several years past he had been frequently obliged to obtain surgical assistance, and had been doing his work under great difficulty. He was much beloved by his patients, and his funeral, on January 7th, was attended by a very large congregation of friends and patients, when the floral display gave evidence of a very widespread sympathy with his relatives in their loss.

Those who had the privilege of knowing him personally marvelled at his untiring energy, his high sense of duty, and devotion to his work. He endeared himself to his patients by his great sympathy and kindness, frequently performing acts for them, in order to relieve suffering, not merely medical, but those of a nurse, and thus earning for himself the eternal gratitude of many who came under his care. He was a man of large experience, with a nature retiring and sensitive in the extreme; strong in his likes and dislikes, a true friend to those who gained his confidence. His was a busy life, and his tastes were of the simplest character; he was the soul of honour, and a man of the highest principles. His influence for good was felt by all who were intimately associated with him, and who now mourn his loss; and he set an example which it is well to follow.

Local Medical Notes.

Bristol Royal Infirmary.—Mr. W. T. Mc Cowen, M.R.C.S., L.R.C.P., has been appointed Junior House Surgeon and Anæsthetist. Mr. J. H. S. Hawes, M.B., B.S. (Dunelm), has been appointed Casualty Officer.

University College, Bristol.—Dr. P. Watson Williams, M.D. Lond., has been appointed Lecturer on Practical Medicine.

Messrs. K. H. Beverley and F. C. Whitmore have obtained the M.R.C.S. and L.R.C.P. diplomas. Mr. C. G. Russ Wood, of Shrewsbury, a former Bristol student, has obtained the F.R.C.S. Eng. diploma. Mr. F. P. Mackie, F.R.C.S. Eng., L.R.C.P., in the last Indian Medical Service Examination obtained the first place and the Montefiore Prize of twenty guineas.

The Bristol General Hospital.—Mr. W. S. V. Stock, M.B., B.S. Lond., M.R.C.S., has been appointed House Surgeon to the Hospital. Mr. A. F. Martin, M.B., Ch.B., Vict., late House Surgeon to the Hospital, has been appointed House Surgeon to the North Staffordshire Infirmary.

Association of Midland Railway Surgeons.—At a meeting of Midland Railway Surgeons, held in Birmingham on November 27th last, it was decided to form the above Association on lines similar to those of the long-established Great Western Railway Provident Society Medical Staff. Any Midland Railway Surgeons wishing to join the Association should send their names and addresses to Dr. Ffennell MacCarthy, 58 The Tything, Worcester.

Zymotic Diseases.—The editor has to thank Dr. D. S. Davies for the following notes on the various zymotic diseases prevalent in the city of late:—

1. *Smallpox.*—This disease has recently been somewhat prevalent in many of the Midland and North Country towns, with a tendency to spread southwards, often through tramps.

No smallpox has been introduced into Bristol from October, 1902, when a fatal case occurred in a coloured sailor arriving on a steamship from Salonika, until early in January, 1903, when a girl of 16, living in the middle of the city, developed smallpox. The origin of this case was obscure, but was probably through some articles of clothing received from relatives in infected districts. Two resultant cases—one in an unvaccinated sister, the other in a "devaccinated"[1] woman of 35, who refused re-vaccination, completed the history of this introduction.

At the end of January a tramp at Horfield prison developed

[1] I use the term "devaccinated" with Dr. Bond's meaning; viz., vaccinated in infancy, but having outlived the protection period."

smallpox, and was removed to the city hospital at Novers Hill; no resulting cases followed.

On February 12th, a youth at Avonmouth, who had visited Cardiff for a week, developed smallpox at the correct period to point to infection received in Cardiff.

2. *Scarlet Fever.*—This disease has now been prevalent in epidemic form for three years, and the usual remission may be expected soon. Although the attack rate on the population is the highest recorded since Notification commenced in 1890, it is satisfactory to note that the death-rate has not risen proportionately, and has been exceeded in two recent epidemics; viz., in 1892 and 1896. The disease is of fairly mild type, the case mortality per cent. being 2.4, which has been exceeded on eight occasions in the past thirteen years.

The actual number of deaths has been 66, out of a total population of 338,000, which compares most favourably with the terrible mortality from this disease forty years ago. In the 1863–64 epidemic, over 1,100 deaths occurred from scarlet fever alone, although the population then numbered only some 160,000 persons.

Diphtheria.—This disease has proved a source of far greater anxiety than either smallpox or scarlet fever since February of 1900, when the virulent, rapidly spreading form first made its appearance in the southern portion of the city, in Bedminster. Between the years 1886 and 1900 diphtheria had never proved a source of trouble or proved difficult to control; it caused no school outbreaks, and the death rate over a period of 10 years was less than half that recorded for the large towns of England and Wales.

But since 1900 it has invaded district after district, showing high infectivity, and causing considerable mortality. It has thus not only thrown considerable strain upon the exiguous city accommodation for infectious diseases, but has also pressed heavily upon the local Hospital and Infirmary, to which urgent cases have been sent for operative relief.

The efficient control of this disease in virulent form can only be secured by constant medical examination of contacts in infected houses, who so frequently act as "carriers," harbouring the bacilli in nose or throat without obvious clinical symptoms, and in this way securing its persistence. The colossal nature of this work, with the vast amount of bacteriological examination and re-examination necessary, has as yet been grasped by few local authorities, for the majority cannot understand the existence of a disease that is not to be controlled by isolation, disinfection, and attention to drains.

4. *Measles.*—During the autumn this disease was very prevalent and fatal. The school attendance was considerably affected, and a system of school notification adopted, so as to give some opportunity of visiting and cautioning the inmates of affected houses. The effect, however, was not very marked, and the disease burnt itself out as usual.